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PRACTICAL FARM ECONOMICS

HENRY C. TAYLOR
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PRACTICAL FARM ECONOMICS

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PRACTICAL FARM ECONOMICS

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IN HIS EFFORTS to make his farm pay, the farmer must decide what to produce and how to produce it and what to sell and how to sell it. His success depends on his making the right decisions on these questions. These questions come up nearly every day in the year and decisions must be based on a knowledge of principles and facts and not on some simple rule of thumb. Farm economics deal with the principles one needs to understand and the information one needs to have in order to make correct decisions. Farmers who understand these principles and know how to apply them are the ones who make the most out of farming.

PRACTICAL FARM ECONOMICS

CHAPTER I

AIMS AND ENDS IN FARMING

Men work to satisfy their wants for food, clothing, shelter, and the good things of life. Nature provides abundant opportunities for people to produce the means of satisfying their wants, but people must work to take advantage of these opportunities.

Since we must work to satisfy our wants, it is very important that this work be done to give the greatest amount of satisfaction. Under civilized conditions, where men work together in producing the things they need to satisfy their wants, more wants can be satisfied by having different men become expert at doing different things. It is for this reason that we have farmers, merchants, carpenters, doctors, and many other different kinds of workers.

Many people feel that they can get the most satisfaction in life by farming. Some may farm for no reason except that they have grown up as farmers, but most farmers can mention a number of reasons for choosing farming as an occupation. Some of these reasons center around the case of getting a living or of earning money. Others have chosen farming because they like farm life or the conditions surrounding farm life.

Most farmers were reared on farms and got some training as farmers while growing up. (See fig. 1.) This early experience has made them feel better fitted for farming than for anything else. Many farmers inherited farms, on which they find it easy to make a satisfactory living. The safety of investment in farm land and the hope of rising land values has made farming attractive to others.

The desire to be his own boss and to work in the open with growing things influences many a man to decide to farm. Love for the surroundings of their youth and a desire to be near parents and friends are important considerations to others. Preference for a farm home as a place for rearing children and the ambition to establish a permanent home and business to leave to their children keep many people on the farm.

Many other reasons for choosing farming as an occupation could be given. These are sufficient to account for the fact that there are enough farmers to supply us amply with food.

Once a man has decided to farm, his chief aim then is to get for his work as a farmer and for his capital invested the largest return in money or in products.

In pioneer days the members of the farm family spent most of their time in providing their own food, clothing, and shelter. Farmers to-day, on the other hand, are engaged primarily in the production of things to sell. They still produce vegetables, fruit, milk, butter, eggs, meat, etc., for use in their homes, but their well being depends upon their ability to produce something to sell and upon the relation between the prices they get for these products and the prices they must pay for what they must buy.

The problem of what to produce and how to produce it is very different under this system where production is primarily for sale rather than for home use.

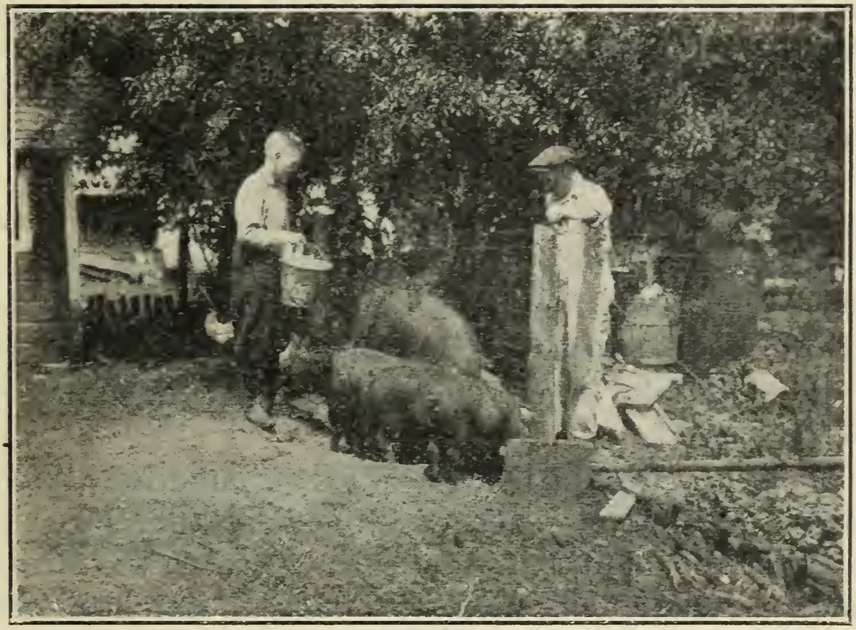


FIG. 1.—Farm boys learn much about farming from their fathers

Under the old system a farmer had only to know the needs of his own family. Now he must consider the desires of the large number of people who are to use his products. A farmer can judge these desires only by studying the prices offered in the market for the things he is producing or expects to produce. Before deciding what to produce he must also consider the prices of the things he will use in this production—the land, machinery, and hired labor.

CHAPTER II

WHAT IT TAKES TO MAKE A FARM BUSINESS

A farmer works with all of the forces of nature as well as with a variety of man-made tools. The soil, moisture, air, light, and heat are a part of his farm and every day his work brings him in close touch with all of these forces. The condition of the soil and the rainfall determine to a large extent the work that can be done from day to day. Rainfall and temperature limit the crops the farmer can afford to grow. Fertilizer, manure, and good cropping systems will improve the natural fertility of his farm. Land that is too wet can be drained. Dry land sometimes can be irrigated. In the main, however, the farmer must so shape his work as to take advantage of these forces of nature as he finds them.

A farmer ordinarily thinks of his land and buildings as his farm. The land includes the forces of nature. The buildings are needed to protect the farmer and his family, his helpers, livestock, and machines. But more than land and buildings are needed to make a farm business. The plows, harrows, drills, mowers, binders, wagons, tractors, and other machines or tools are an important part of the farm business. Work horses, mules, cows, hogs, and other livestock are also necessary.

Still another and the more active part of the farm business is the farmer himself. He does much of the work that is necessary in growing crops and caring for livestock. Members of his family or hired helpers are frequently needed to help with this work. In addition to his part in doing the actual farm work, the farmer is also responsible for the management of his farm. He must decide what crops to grow, what livestock to keep, how to handle his crops, how to feed his livestock, when to do each job that needs doing, and endless questions of a like kind. The success or failure of the farm business depends largely upon the ability of the farmer to make the right decisions on these matters.

A farm business, then, is made up of land, buildings, machinery, livestock, labor, and management. These things may be put together in all kinds of combinations. Some farmers use large areas of land, raise large numbers of livestock, and keep several men busy all the time. Others have smaller farms, keep only a few livestock, use very little machinery, and do most of the work themselves. And there are still other farmers who use very little land, but a large number of men who do most of the work by hand.

TABLE 1.—*A typical farm business in each of six different regions*

	Georgia cotton farm	Pennsylvania dairy farm	Indiana corn and hog farm	Kansas wheat farm	Washington irrigated farm	Virginia fruit farm
Acres of land	35	112	80	316	40	100
Cows	1	20	4	4	3	2
Other cattle	1	2	6	10	1	
Hogs	2	4	40	10	5	1
Chickens	40	75	125	120	60	85
Horses	1	6	3	10	3	4
Value of buildings	$550	$7,900	$4,190	$1,555	$900	$4,870
Value of machinery	$147	$660	$464	$1,212	$724	$417
Number of men (including operator).	1 man all year; extra man 3 months	2 men all year; extra man 7 weeks	1 man all year; extra man 3 weeks	1 man all year; 2 extra men 3 months	2 men all year; extra man 6 weeks	3 men all year; 10 extra men 2 months.

A Georgia cotton farmer uses only a few acres with small inexpensive buildings and little machinery. He keeps a cow to provide milk and butter for his family and he raises a few chickens and pigs. His wife helps with the cotton chopping and picking and he does the rest of the work himself. A Pennsylvania dairy farmer has three times as many acres of land as a Georgia farmer and a number of large expensive buildings. He uses more machinery and work horses. Twenty cows are kept, and he helps to provide the people of near-by cities with milk. Two men are kept busy all the time and some other help is needed during the hay harvest and at silo-filling time. An Indiana farmer feeds his corn to his hogs and keeps a few cows and beef cattle. He has better buildings than the Georgia farmer and uses more machinery.

Many acres of land, large machines, and several horses are used by the Kansas wheat farmer. He has only a few buildings and raises relatively few livestock. He needs help during the summer, but is not very busy in winter. A Washington farmer irrigates his land and keeps himself and another man busy on a few acres. A Virginia fruit grower uses much labor, especially at picking time, but keeps only a few livestock. (See fig. 2.)

There are wide differences in the usefulness of the land, buildings, machines, cows, and other resources with which farmers work. Cows differ in their capacity to consume feed and cows getting the same feed usually do not give the same amount and quality of milk. Some horses can do more work than others on the same amount of feed. Also one farmer's land is different from that of his neighbor. This may result from a difference in the use of cropping systems and manure or may be due to a difference in the type of the soil or in its natural fertility. Some soils are heavy and it takes more work to get them in condition for seeding than is required for the lighter soils. On many farms there are some fields that always give better yields than other fields that have had the same treatment. Land differs in its usefulness also because of its location. Farmers who live near cities get the same prices for their products as the farmers who live at a distance, and it costs them less to get their products to the city.

These differences in the usefulness of the things that farmers work with are due to differences both in their capacity and efficiency. Cows that can not consume the same quantity of feeds differ in capacity. Cows that eat the same feeds, receive the same care, and do not give the same amount of milk differ in efficiency. The usefulness of cows depends both upon their capacity to consume feed and their efficiency in converting the feed into milk. The usefulness of a machine depends both upon the number of men and horses needed to operate it and upon the amount of work it can do in a given time. Likewise, farmers themselves differ in capacity and efficiency. One farmer has the capacity to manage a farm of several hundred acres where a number of men, horses, and machines are used. Another farmer can do much better with a smaller business where he does most of the work himself. Farmers using the same amounts of land and equipment and the same number of men usually do not make the same profits from farming because of differences in their efficiency as managers.

In deciding upon the make-up of his own farm business a man must take stock of his ability as a manager and decide whether to rent or buy a large farm with all of the necessary machines and livestock and hire the help needed to do the work, or whether to use a smaller farm with fewer horses and tools and do most of the work himself. If one has the capacity to manage a large business successfully, he will have a greater opportunity to make money by running the large business. A large business, on the other hand, gives the manager of small capacity a greater opportunity to lose money, and in the long run he will usually be better off with a small business. The farmer of small capacity may be very efficient in running a small business and may make as much profit

FIG. 2.—A quarter-section Iowa grain-and-livestock farm

from it as the manager of large capacity who is not so efficient.

In choosing the land, machines, cows, horses, etc., to use in farming, a farmer must take account of the differences in the usefulness of these things. The farmer who, because of better planning and more inspiring leadership, can secure larger returns from the labor employed can better afford to hire and pay the necessary wages to secure the most efficient workmen to help him than can the farmer who has a lower degree of efficiency as a manager. In the same way the farmer who can get the most out of land, machines, cows, and horses can afford to pay more for good land, good machines, good cows, and good horses than can his neighbor who is not capable of making the best use of these things.

Because of the differences in the abilities of farmers and in the things they work with there is a tendency for the best farmers to get the best land, to have better stock, and to use better equipment. A good farmer can make more out of the best land than a poor farmer can and to get it he has to pay only a little more for it than the next best farmer who wants it can afford to pay. Not only do the better farmers buy out the poorer ones but good farmers are constantly improving their farms. Consequently, the best farmers often have the best farms, the best cows, and better equipment to use because they have been careful to keep up and improve the fertility of their soil, breed up their cows, and take care of their implements.

CHAPTER III

WHAT CROPS TO GROW AND WHAT LIVESTOCK TO KEEP

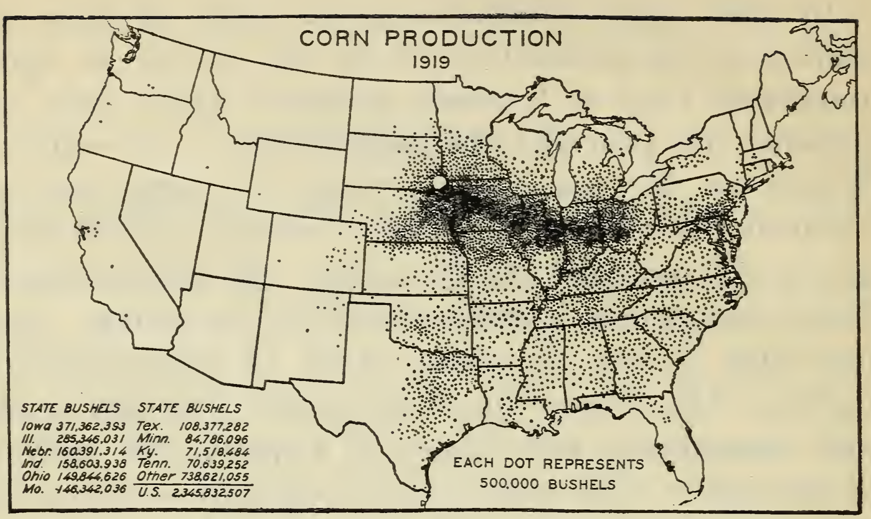
It is easy to say that one should grow the crops and keep the livestock on his farm that will give him, one year with another, the largest return for the use of his labor, machines, buildings, land, and other farm resources. This is the goal, and it is easy to see. But in actually working out the problem on a farm there are many things to consider, and it is often not so easy to know just what to do. Unfortunately, decisions can not be made once for all time, but must be made again and again, from season to season, if one wants to make the most out of farming.

Some of the things that a farmer must consider in deciding what crops to grow and what livestock to keep are not directly under his control. For example, he can not change the effect of the weather upon the crops that he can grow. A farmer usually plants his crops and feeds his livestock without a definite knowledge of what he may expect to get for them when they are ready to sell. However, the fact that these matters are not directly under his control should not keep him from studying them. In fact, it is all the more reason why he should study them so that he will know just how to take advantage of the changes taking place from time to time that affect his farming business.

In most regions farmers devote most of their attention to the production of the one or two or three important crop or livestock products which their experience has proved to be most reliable. In southern Wisconsin, for example, dairying is a large part of the farm business, and the other livestock and the crops grown are secondary to the dairy. On most southern farms everything is made secondary to cotton. And the same is true to some extent of every farming region. The adaptation of crops and livestock to the soil, topography, and climate of a region, the location of the region with respect to the place where the products are finally used, and the prices for which the products can be sold at the farm are some of the important things which limit the crops and livestock that can be grown to advantage in any region.

(1) The soil, topography, rainfall, and temperature of a region place a limit upon the crops and livestock which can advantageously be included in the farming business. All crops do not need the same amount of rainfall in order to make their best growth. Corn needs good June, July, and August rains, while alfalfa will stand a drought fairly well. Some crops stand heat or cold better than others. Potatoes do better in a cool climate, while corn grows better when the summer is too hot for comfort. Oats thrive in regions with a cool, moist climate and short growing season. Cotton, on the other hand, usually needs a growing season of 200 days or more. (See figs. 3 and 4.)

The soils of different regions and on different farms are better adapted to the production of some crops than others. Cotton will grow on very poor soils, but



STATE	BUSHELS	STATE	BUSHELS
Iowa	371,362,393	Tex.	108,377,282
Ill.	285,346,031	Minn.	84,786,096
Nebr.	160,391,314	Ky.	71,518,484
Ind.	158,603,938	Tenn.	70,639,252
Ohio	149,844,626	Other	738,621,055
Mo.	146,342,036	U.S.	2,345,832,507

FIG. 3.—The Corn Belt stands out distinctly. Six States, within which the Corn Belt lies, produced in 1919 more than half the total for the United States.

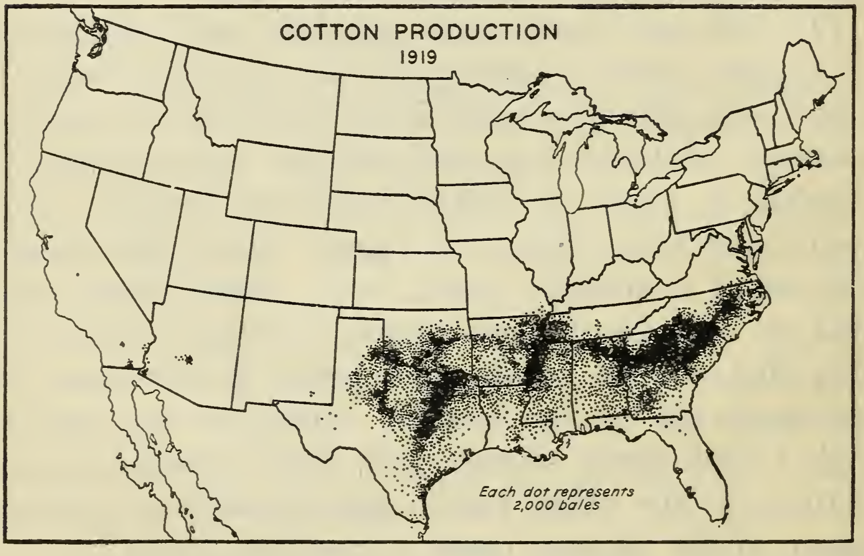


FIG. 4.—Cotton production is highly concentrated in a relatively small area in the South

it also responds to the good soils in the Mississippi Valley. Corn growing takes a rich soil and does best on land that is level, so as to stand heavy work without the soil being washed away. All of these things help to place a limit on the crops that a farmer in a particular region can afford to grow.

By limiting the grazing period and the crops that a farmer can grow, the soil, rainfall, and temperature also influence the livestock that he should keep. Furthermore, livestock are directly affected by the climate. Dairy cows do better in a cool, moist climate, and go dry on dry feed and dry pasture, especially if the weather is hot. (See fig. 5.) Mules are better than horses for work animals in the South on account of the hot weather. The fine horse-breeding industry has thrived mostly in regions having limestone soils.

The experience of farmers in the older farming regions has shown them what crops and livestock it is possible for them to produce with the usual rainfall, temperature, and soil fertility that they must work with from year to year. Consequently they grow the crops and keep the livestock which their experience has proved to be most reliable.

(2) *The prices that can be gotten for different products must be considered.* In most regions the climate and soil are such that a farmer can grow several different crops if it pays him to do so. The rainfall, soil, and temperature help to limit the bushels, pounds, or tons of a crop that he can grow per acre in a given year. In choosing the crops to grow he should know the value of that which can be grown as well as the

amount. For example, an acre of wheat making 20 bushels per acre and selling at $1 per bushel is worth $20, while an acre of oats making 50 bushels but selling at only 30 cents per bushel is worth but $15.

The price which the farmer can get at his farm or at a near-by shipping point for his products is partly determined by the location of the farm. For example, the average price paid to Illinois farmers for corn on January 15, 1924, was 67 cents per bushel, while the average price paid to Iowa farmers on the same date was 63 cents per bushel. The chief reason for this difference in the prices paid for corn in these States is the difference in the cost of shipping corn from these two places to Chicago and eastern markets.

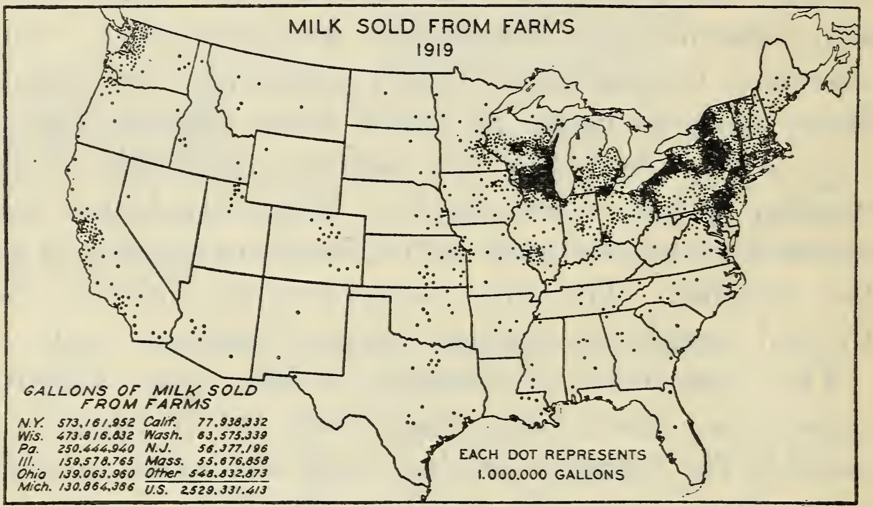


FIG. 5.—The concentration of surplus milk production in the North Atlantic States and in the East North Central States just north of the Corn Belt is a natural result of nearness to centers of dense population and of conditions favorable to the growth of forage crops and pastures

Perishable foods, such as milk and fresh vegetables, must be produced close to the place where they are to be used so they will still be fresh when they get to the people who buy them. For this reason we find most of the farmers surrounding our large cities engaged in dairying and growing fresh vegetables to sell to the people in the cities. The use of refrigerator cars and fast "milk trains" has made it possible for our large cities to get their milk from greater and greater distance.

Unlike fresh milk, butter does not need to be made near the place where it is consumed. Minnesota, Wisconsin, and Iowa are the most important butter-producing States. By use of cold storage and refrigerator cars butter can be kept for some time or shipped long distances and still keep its quality. Butter is also a product that sells at a high price per pound, and the cost of shipping is not so large a part of the price as in the case of some bulkier products shipped long distances.

Products that sell at a low price per pound can not be shipped very far. For example, a bulky product, such as hay, must be grown near the place where it is used because the cost of shipping it any considerable distance would soon take so large a share of the selling price as to make it unprofitable. Tobacco and cotton, on the other hand, sell at a relatively high price per pound and can be shipped all over the world. Consequently they are grown in the regions where they grow best and are shipped to the places where they are used.

CHAPTER IV

WHAT CROPS TO GROW AND WHAT LIVESTOCK TO KEEP—*Continued*

The question might be raised: Why not choose the one crop, or the one crop and one class of livestock, which is best suited to a region, and produce it to the exclusion of all other crops and livestock? In some cases this is done. Many farmers in the wheat-growing regions of the United States grow wheat to the exclusion of practically all other crops. A large portion of the tenants in cotton and tobacco-growing regions grow only one crop. However, there are several good reasons why most farmers grow several crops and keep at least a few head of two or three different kinds of livestock.

Most crops need attention only during certain rather definite seasons of the year. Corn, for example, takes considerable work from the time plowing is started in the spring until cultivation is finished in June or July. After that, unless it is cut and shocked or put into the silo, there is nothing to do until husking time in the fall. Cutting and threshing small grain and putting up hay always make busy seasons on the farm, but this season lasts only a few weeks. So if a farmer decided to pick out one of these crops and grow only the one crop, he would be very busy for a part of the year and have little or nothing to do during the rest of the year. His teams and equipment would also be idle and he would usually find it hard to make any profit by such a system of farming.

The work on cotton and tobacco is scattered more nearly throughout the year. The field work on tobacco takes a lot of time from May until August or September, and the curing, stripping, and marketing are usually not finished until February or March. Then it is time to start getting ready for another crop. But the tobacco grower can not grow tobacco on his entire farm every year, because the same land will not make good tobacco year after year. It must be put into other crops or allowed to lie idle. Consequently tobacco is usually grown as a part of a system of general farming which includes other crops and some livestock.

Many crops do not interefere with each other. Land that is planted to corn in the spring can not be sown to oats in the same spring. A Corn Belt farmer can grow only about as many acres of corn as he can prepare the land for and plant and cultivate the first and second times. (Fig. 6.) But he can prepare additional land and put in oats before corn-planting time and can then harvest the oats without seriously neglecting the corn cultivation. Clover or grass can be seeded in the oats with very little additional trouble and a hay crop harvested the following year. This means a very busy season and long work days during June and the first part of July; but unless the acreages of oats and hay are too large, it will not be necessary to cut down the corn acreage because the oats and hay are grown. This same principle applies in the case of most other crops. The cotton farmer and his family should not grow more cotton than they can pick, and so they can grow a few acres of other crops along with the cotton without reducing the income from cotton.

Another reason for not depending upon a single enterprise is the risk involved. A farmer who has only one thing to sell is hard hit when the price is low or if the weather ruins his crop. Unless the profits of good years are saved, two or three of the bad years coming together mean disaster to the one-crop farmer. A farmer should not try to grow a little of everything merely because of the risk of "putting one's eggs all in one basket," but usually a few lines of production can be chosen that fit well together in a farming system which will give more complete employment to the labor and equipment of the farm and reduce the risk of a low return in years of low yields or low prices in one line of production.

Good farm management consists of putting together the crop and livestock enterprises which will yield maximum profits. Upon what basis should a farmer choose his enterprises? In answering this question, the conflicting demands of different crops for the farmer's attention must be considered. For example, it was mentioned above that the cotton farmer can grow a few acres of corn without cutting down the amount of cotton he can grow, but if more than a few acres of corn are grown, the acreage of cotton will have to be reduced or more labor hired. Where two crops need attention at about the same time during the year, as in this case, they may be regarded as competing crops, because if one grows more acres of the one crop, he will have less time to devote to the other crop needing attention at the same time. Other examples of competing crops are corn and tobacco in Kentucky, corn, sugar beets, and tobacco in southern Wisconsin, and sugar beets and potatoes in Michigan. All of these are tilled crops and any one of them can be used to keep the soil in good tilth and free from weeds.

FIG. 6.—On most Corn Belt farms nothing is allowed to interfere with corn planting and cultivating

The spring grains, oats, barley, and spring wheat, form another group of competing crops. They are sown and harvested at about the same time and are about equally useful as nurse crops for starting meadows. Rye and winter wheat are other examples of competing crops which fill the same place in the cropping system and need attention at the same time of the year.

In deciding which of two competing crops to grow, a farmer is interested in knowing the effect of his choice upon the profits of the business. To illustrate, the case of a Minnesota farmer who has to choose between putting a 30-acre field into oats or barley may be taken. This farmer knows by experience that many things will not be affected by his choice of either crop. The same land will be used whether seeded to oats or barley. He expects to disk the land for either crop, so that the labor and machinery needed in disking, harrowing, and seeding will be the same for either crop. As nearly as he can tell in advance, the labor and equipment needed in cutting the two crops will be the same. Then he does not need to bother with these items in making the choice.

There are several items, however, that will not be the same. The cost of the seed, twine, and threshing for the 30 acres of oats or 30 acres of barley is shown in Table 2. The cost of these items would be $25 more for the oats than for barley. But the returns would also be different. The farmer knowing his field and what it usually produces believes that he can count on a yield of 45 bushels of oats or 25 bushels of barley, and he estimates that the price at the machine in the fall will be about 35 cents for oats and 50 cents for barley. The straw from either will be worth about the same for use on the farm. On this basis the 30 acres of oats would be worth $97.50 more than the barley, and after paying the extra costs on the oats the farmer would get $72.50 more by putting the field into oats than into barley.

Table 2.—*Differences in the costs and value of 30 acres of barley and 30 acres of oats*

	Oats		Barley	
	Quantity	Cost	Quantity	Cost
Seed, bushels	80	$37.60	55	$33.00
Twine, pounds	104	14.56	70	9.80
Hired labor for threshing		28.54		23.40
Hire of threshing machine, bushels	1,350	40.50	750	30.00
Total		121.20		96.20

Difference in cost in favor of barley ($121.20−$96.20)=$25.

VALUE OF OATS AND BARLEY

Oats, 1,350 bushels, at 35 cents per bushel	$472.50
Barley, 750 bushels, at 50 cents per bushel	375.00
Difference in value in favor of oats	97.50

Net difference in favor of oats ($97.50−$25)=72.50.

But there are very few cases where it is as easy to choose between two competing crops as in the case of oats and barley. These crops take about the same amount of labor, the same kind and amount of equipment, they need attention at the same time of the year, and they occupy the same place in the cropping system. Consequently, a few calculations of the differences in the cost of seed, twine, and threshing, and in the value of the crops, will show which of the two crops is likely to prove most profitable.

But a comparison of the relative profitableness of two competing crops like corn and cotton, or corn and tobacco, can not be made so easily. In comparing corn and tobacco, for example, account must be taken of the fact that an acre of tobacco calls for more labor than does an acre of corn, so that, with a given amount of labor, many more acres of corn than tobacco can be grown. In deciding whether to grow corn or tobacco, then, a farmer must compare the profits he can make on the number of acres of tobacco he can grow with the profits on the number of acres of corn he can grow. If on this basis tobacco is the more profitable crop, he can still afford to grow a few acres of corn, because the work on a few acres of corn does not keep him from growing all the tobacco he can take care of at transplanting time and at harvesting time.

Another factor that makes it difficult to compare the profits of two competing crops like corn and cotton, or corn and tobacco, is the interdependence of the different lines of production on the farm. In comparing corn and tobacco the farmer of south-central Wisconsin must keep in mind the fact that corn can be put into the silo and made the basis for winter employment in the dairy, whereas no crop or livestock enterprise depends upon the tobacco crop in a similar way, and tobacco conflicts with the harvest of small grain and hay. Because of the many complicating factors, it is necessary to compare the profits that can be made from tobacco and what can be grown along with it, with the profits from a farm business which includes corn, oats, and hay and the livestock to which these crops may be fed. This makes a very complicated problem, but it is only in this way that a farmer can determine the effects of his choice upon the profits of his business.

Because the livestock that are kept depend largely upon the crops grown, the question of the kind of livestock and the number of each kind to keep must be considered along with the question of what crops to grow. Crops may be divided roughly into two classes, based upon the way in which farmers dispose of them. The first class consists of crops grown primarily for sale, such as cotton, tobacco, and wheat. In the second class are crops and crop by-products used primarily for feed, but some of which are sold, such as corn, oats, hay, straw, and corn silage. There is no question about what to do with the crops grown primarily for sale. Nor is there any question about what to do with any crops or crop by-products that can not be sold until they are first eaten by the livestock. But in the case of corn, oats, hay, and other salable feeds a farmer must decide whether he can get the most for them by selling them directly or by feeding them to livestock. The answer to this question depends upon the relation between the prices for which the feed can be sold and the price for which the animals or animal products can be sold. But this is not as simple as it may seem at first thought.

Take, for example, the case of an Iowa farmer who raises corn. If he feeds his corn to beef cattle and hogs he may also get a good return for the cornstalk pasture that would otherwise not be used. (Fig. 7.) Then the cattle will eat such roughages as straw, corn fodder, and hay, all of which could probably not be used or sold if all of the grain were sold. The hogs pick up a part of their feed running after the cattle. If the hogs and cattle pay for the salable feeds which they eat and return something for the time spent in feeding and caring for them, they may be profitable although they give only a small return for feeds which otherwise could not be sold. Then, too, if the corn is fed on the farm along with the other feeds, the manure may be used to keep the soil productive. It is never easy to know how much this added fertility is worth, but in deciding whether to feed or sell these crops it must be kept in mind that yields are usually higher on stock farms than on grain farms of equal natural fertility.

There is also the problem of deciding whether to keep beef or dairy cattle on this Iowa farm. If dairy cattle are kept, they will need attention throughout the year, and the time that can be spent in the cornfield will be reduced. Beef cattle, on the other hand, need very little attention in summer and from this standpoint are most satisfactory in the heart of the Corn Belt where it pays to put in long days in the cornfield. In the northern edge of the Corn Belt, however, there is danger of damage to the corn by frost and it can be handled more safely through the silo. For this reason, and because of the market for milk in near-by cities, dairying is the outstanding livestock enterprise on the farms of this region.

It is frequently easy for a farmer to handle two or more classes of livestock together. On the dairy farm where cream is sold the skim milk may be fed to hogs. Hogs in the beef cattle feed lot need very little additional attention and pick up a large part of their feed. A few pigs following the dairy herd may be grown on very little feed. On many Corn Belt farms, and in the grazing areas of Missouri and Kentucky, colts are raised as a by-product. One or two mares can be kept and worked only during rush seasons when large teams are needed. By combining colt raising and corn growing the cost of the horse work in corn growing is reduced.

In choosing livestock, then, one must consider the feeds that can be grown to advantage, the prices at which the livestock or livestock products can be sold.

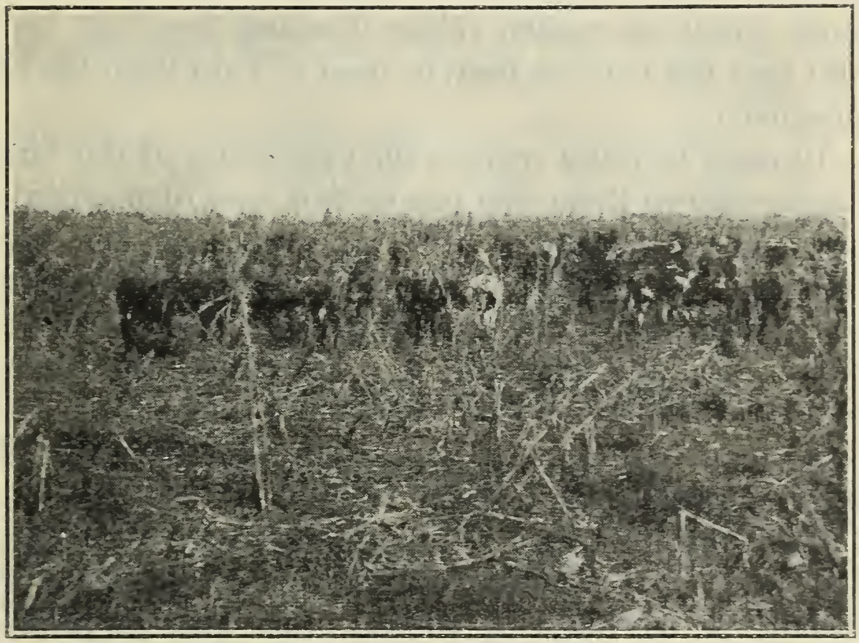


FIG. 7.—Beef cattle in an Illinois cornfield. They give value to unsalable cornstalks and require very little of the farmer's time

the extent to which the feeding and care of livestock will interfere with the work of growing crops, and one's own likes and dislikes and ability in handling different classes of livestock. The possibility of buying feeds for livestock must also be considered. On many farms more hay, fodder, and silage are produced than can be fed to advantage unless some grain is bought to feed along with the home-grown roughage. For example, many eastern dairy farmers grow hay and silage for their cows and buy all or a part of their grain.

It must always be kept in mind that much of the work on livestock is done in winter and at other times when there is little rush work on crops to be done; that much of the rough feeds and pasture eaten by the livestock would be wasted if the livestock were not kept; and that the manure may be used to help keep the soil productive.

In most farming regions the experience of the farmers has shown them that one or two lines of production should have a place of first importance in their farm business. In the cotton-growing States, for example, the cotton crop is the most important line of production. Corn and hogs and, to a less extent, the feeding of beef cattle are of first importance in the Corn Belt. The one or two lines of production that are given the most attention on a farm usually do not keep the farmer and his teams and equipment busy throughout the year. Consequently the returns of the farm can usually be increased by adding other lines of production to the business so as to use what would otherwise be waste time of men and equipment, waste feeds, and the like, provided the additional return from the side lines is enough to compenesate for the extra work involved.

Unfortunately the farmer can not decide once for all time the crops and livestock that will be most profitable on his farm. The prices at which the different farm products can be sold are changing from year to year. Likewise the costs of the labor, seed, twine, fertilizer, feed, and land, which he uses in different amounts for different lines of production are also changing from year to year. Because of these changes in prices and costs the profits of different lines of production are also ever-changing. It is necessary, therefore, for a farmer to make his plans from year to year on the basis of the most reliable information he has concerning the prices he may get for his products when they are ready to sell. The farmer who has established a profitable system of farming and has the equipment and buildings needed in carrying it on should be slow to make changes in his lines of production which would mean large expenditures for new machines or new buildings. Changes in prices or costs may be only temporary, in which case another change will be necessary before the new equipment and buildings are worn out.

But a farmer should not be too slow in making changes in the farming system if by so doing he may take advantage of changes in prices or costs. Many changes in crops and livestock can be made with small additional cash outlays for equipment, buildings, and investment in livestock. A farmer who watches the changes in prices and costs and makes such changes as soon as it is apparent that they will result in greater returns will be much better off than the one who waits until he finds by experience that these changes are desirable. A farmer who waits very long before changing is likely to find that he changed just when the prices and costs were starting the other way.

CHAPTER V

HOW TO MAKE THE MOST OUT OF EACH LINE OF PRODUCTION

The farmer's profit is made up of the profits on each line of production included in the farm business. These profits depend quite as much upon the methods used in handling the different crops and livestock as upon the proper selection of the lines of production. Such problems as the number of times to cultivate the corn, the weight at which to market hogs or beef cattle, how much feed to give the cows, how much fertilizer to use on crops, and a long list of similar problems are faced by any farmer as he tries to add to his profits from each line of production.

In carrying on the different lines of production farmers use land, labor, horses, machines, buildings, seed, twine, feeds, fertilizer, and a great variety of other things. The cotton farmer, for example, in growing his cotton uses labor, a mule, a few tools, seed, and fertilizer, and is at some expense for ginning, bagging, and ties. Immediately the question comes up of how much of these different things to use in growing his cotton so as to make the most profit. In the case of fertilizer, for example, it is not a question of how much fertilizer to use in order to get the largest yield per acre but how much fertilizer to use in order to make the most profit.

An experiment at the North Carolina Experiment Station shows (see Table 3) that by using more fertilizer per acre the yield of cotton per acre was larger. In this experiment the yield of lint cotton was 462 pounds when 1,000 pounds of fertilizer were used and only 237 pounds when 200 pounds of fertilizer were used. If still more fertilizer were used, the yield would probably be some larger, but the time would soon come when more pounds of the same fertilizer would not add anything to the yield. How, then, can one find out the most profitable amount of fertilizer to use? The most important things to be taken into account are the cost of fertilizer, the value of the increase in the yield, and the cost of picking and ginning the larger yield.

TABLE 3.—*Effect of the amount of fertilizer used on the yield of cotton, North Carolina Experiment Station*

Fertilizer used per acre	Yield per acre of lint cotton	Fertilizer used per acre	Yield per acre of lint cotton
Pounds	*Pounds*	*Pounds*	*Pounds*
200	237	800	430
400	322	1,000	462
600	385		

Suppose, for example, that on the basis of these results one should want to decide between the use of 200 and 400 pounds of fertilizer per acre when fertilizer costs $60 per ton, ginning $5 per bale, picking $15 per bale, and lint cotton sells at 25 cents per pound and cottonseed at $35 per ton. Then the differences in costs and returns as shown in Table 4 would indicate that one could get an additional profit of $15 per acre by using 400 pounds of fertilizer instead of only 200 pounds. But suppose that the decision is between the use of 800 and 1,000 pounds per acre. The cost of additional 200 pounds of fertilizer would be the same as above, but in this case the increase in yield is only 32 pounds (462–430) instead of 85. Thus after balancing the additional costs and additional returns the possible profit from the use of this last 200 pounds of fertilizer would be less than $2. There would naturally be more question as to the advisability of increasing the amount of fertilizer from 800 to 1,000 pounds per acre than there would be about increasing it from 200 to 400 pounds per acre. In making his decision, a farmer would have to keep in mind that he might have to cut down his cotton acreage so as to be able to pick the larger yield. He would also find it more profitable to use fertilizer liberally when fertilizer is cheap and the price of cotton high than when cotton is cheap and the cost of fertilizer is relatively high.

TABLE 4.—*Differences in the costs and returns from cotton when different amounts of fertilizer are used*

A. Difference between 200 and 400 pounds of fertilizer:		
Value of additional 85 pounds (322–237) of lint cotton, at 25 cents per pound	$21.25	
Value of 170 pounds of cottonseed, at $35 per ton	2.98	
Increase in value of crop if 400 pounds of fertilizer are used instead of 200 pounds		$24.23
Cost of 200 pounds of fertilizer, at $60 per ton	$6.00	
Cost of picking 85 pounds of lint cotton, at $15 per bale ($1 per hundredweight of seed cotton)	2.55	
Cost of ginning 85 pounds of lint cotton, at $5 per bale	.85	
Increase in costs if 400 pounds are used		9.40
Difference (in favor of 400 pounds of fertilizer over 200 pounds)		14.83

B. Difference between 800 and 1,000 pounds of fertilizer:		
Value of 32 pounds lint cotton, at 25 cents per pound		$8.00
Value of 64 pounds cottonseed, at $35 per ton		1.12
Increase in value of crop if 1,000 pounds of fertilizer are used instead of 800 pounds		9.12
Cost of 200 pounds of fertilizer, at $60 per ton	$6.00	
Cost of ginning 32 pounds lint cotton, at $5 per bale	.32	
Cost of picking 32 pounds lint cotton, at $15 per bale ($1 per hundredweight of seed cotton)	.96	
Increase in costs if 1,000 pounds are used		7.28
Difference (in favor of 1,000 pounds of fertilizer over 800 pounds)		1.84

Another problem in growing crops is found in the matter of the best amount of time of men, horses, and machines to use on each acre. Often we hear it said: "Better plant 20 acres to corn and give it the best of care than plant 30 acres and spread the work of one man over the larger area." This method may give one a larger yield per acre and a crop that looks nicer; but considering it from a business standpoint a very important question is: "In which way can one raise more corn?"

It may be that the 20 acres given the best of care will yield 60 bushels per acre, or a total of 1,200 bushels. Suppose the 30 acres of equally good land, with the same total outlay of men, horses, and machines, would yield only 45 bushels per acre, or a total of 1,350 bushels. If the farmer is renting the land and pays 10 bushels per acre as rent, he would have 50 bushels more corn after paying the rent if 30 acres are grown and given moderate attention than if only the 20 acres are grown and more attention given to each acre.

The farmer's calculations would be about as follows:

	Bushels
20 acres yielding 60 bushels per acre produce	1,200
30 acres yielding 45 bushels per acre produce	1,350
Additional corn from 30 acres instead of 20 acres	150
Rent of additional 10 acres at 10 bushels per acre	100
Additional yield after paying rent on 10 acres	50

If the rent is 15 bushels, it would take all the extra corn, and if it went above 15 the farmer would lose by farming the 30 rather than the 20 acres. On the other hand, if the farmer were giving a share of the corn as rent, and the share he received was the same in either case, he would find it better for himself to farm the 30 rather than the 20, for he would get a share of the 150 bushels. The owner of the land might object, for if all his cornland were farmed on the basis of 20 acres per man, his rent, if he received one-half, would be 30 bushels per acre, whereas if each man put out 30 acres he would receive only 22½ bushels per acre.

The same principle applies to all crops. Either too much or too little land with a given amount of labor and equipment is less profitable than the medium amount which will add most to the farm profits. Having decided upon the number of acres of each crop, the amount of time that can be given per acre of each crop depends upon the number of working days available at the period when the work must be done. For example, a farmer may decide to grow 25 acres of corn, but this does not determine in advance just how well he will prepare the seed bed nor how many times he will cultivate his corn. This depends partly upon the weather, which deetrmines how many days the ground is fit to work in the season for each kind of work. If there is a wet spring the crop may have to be rushed in with but little preparation with the hope that there will be plenty of time to cultivate the corn when growing. On the other hand, if there is little rain there may be plenty of time to put the land in perfect condition. After the corn has been cultivated twice, rains may begin and continue so long that when the ground is again dry enough to cultivate the hay has to be harvested, followed closely by the oat harvest. so there is no time available for further cultivation of the corn. Yet because of the great care given the corn when the weather was favorable the crop may be an extra good one.

Similar problems arise in the production of livestock.—Here it is particularly important to know when the point of greatest profit is reached in the use of feeds. In feeding hogs, for example, a farmer must decide whether to sell them when they weigh 150 pounds or continue to feed them until they weigh 200 pounds or more. This question arises because it takes more feed to put 50 pounds on a 200-pound hog than it does to put 50 pounds on a hog weighing 150 pounds (see Table 5). The weight at which the hogs should be sold in order to return the greatest profit depends primarily upon the relation between price of the feed used and the price at which the hogs can be sold.

TABLE 5.—*Relation of weight of hogs to feed eaten for each 100 pounds of gain*[1]

Weight of pigs	Feed for 100 pounds gain	Weight of pigs	Feed for 100 pounds gain
	Pounds		*Pounds*
50 to 100 pounds	400	200 to 250 pounds	498
100 to 150 pounds	437	250 to 300 pounds	511
150 to 200 pounds	482	300 to 350 pounds	535

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[1] Data from Henry and Morrison's "Feeds and Feeding," seventeenth edition, p. 569.

As it takes more feed to put a pound of gain on 200-pound hogs than it does upon 100-pound hogs, it is to be expected that hog feeders will feed their hogs out to a heavier weight when hogs are relatively high in price than when they are relatively low in price. The relation between the average weight of hogs sold and the number of bushels of corn that can be purchased with the price of 100 pounds of pork is shown in Figure 8. From this chart it is apparent that in general farmers do not feed out their hogs as heavy when corn is high and hogs cheap as they do when hogs are high and corn cheap.

The difference in the price of hogs at different weights must always be considered in deciding upon the weight at which to sell so as to secure the most profit. For example, in the last week of May, 1923, light hogs (150 to 200 pounds) sold for 14 cents per 100 pounds more than heavy hogs, while in the corresponding week of 1924 heavy hogs sold at a premium of 32 cents per 100 pounds over light hogs.

Weight of hogs	Selling price per 100 pounds at Chicago	
	May 26 to 31, 1924	May 28 to June 2, 1923
Heavy, 250 to 350 pounds	$7.38	$7.08
Light, 150 to 200 pounds	7.06	7.22

The problems of the dairy farmer and the beef-cattle feeder are similar to those of the hog producer. Adjustments must be made in feeding practices as the prices of different feeds or of livestock products change. The dairyman can get a fair flow of milk by feeding silage and clover hay, but he can get a larger flow of milk by adding some ground oats or bran and some oil meal. By special care in feeding, a gradual increase in the amount of concentrates will continue to increase the milk flow, but long before the point of greatest

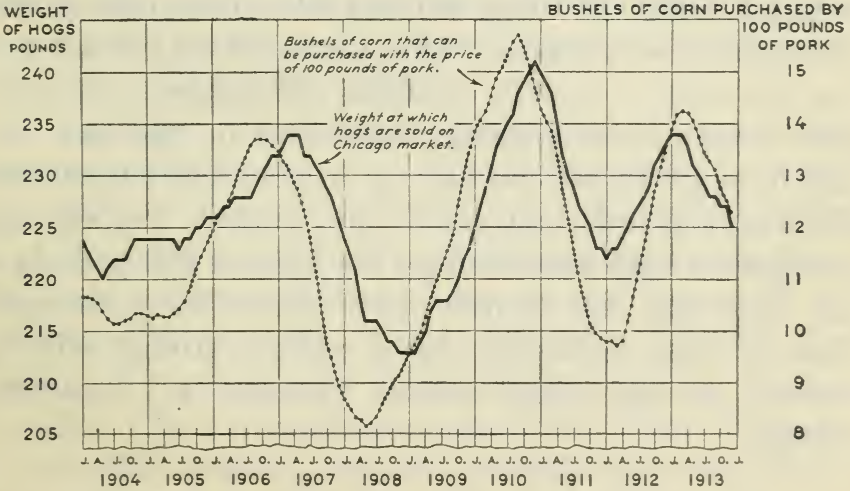

FIG. 8.—Relation between the prices of hogs and corn and the weight at which hogs are sold

milk flow is reached the farmer finds he can not handle so many cows if he gives so much attention to each one. Where records are being made for advertising purposes it may pay to get the greatest flow of milk, but where the additional milk is the sole return it will not pay to give so much attention to each cow because more milk can be secured from the same outlay of feed and labor by keeping more cows and taking a smaller amount of milk from each cow. The amount of feed and attention that it pays to give a cow depends upon the individuality of the cow, the price of milk, and the cost of the feed and labor.

The problem of how to conduct each line of production so as to make it pay the most is one that is up for decision from day to day and season to season. Decisions reached at one time may have to be changed shortly afterwards because of changes in prices or changes in weather. A farmer must constantly have in mind doing the thing which adds most to the profits of the farm as a whole. One year this may mean giving the corn a fourth or fifth cultivation. Another year it may mean putting more time on the hay harvest in order to get the hay up in good condition, even if the corn is only cultivated three times. For the hog producer it may mean selling his hogs at 200 pounds at one time and 250 pounds after prices have changed. None of these questions can be settled satisfactorily by custom, as the right answer changes as conditions change.

CHAPTER VI

SIZE OF THE FARM BUSINESS

On most farms a number of different lines of production are carried on, and the farmer's problem, in the final analysis, is to get the most out of all of his enterprises combined—that is, out of his entire business. He can carry on each line of production very efficiently and still not get a very large return from farming because the farm as a whole is too small. A good dairyman who keeps 30 cows and grows some crops has a better chance to make money than a dairyman of equal ability who keeps only 15 cows of the same grade and grows proportionately fewer crops. Two wheat growers may produce their wheat at the same profit per bushel and yet one may make a much larger total profit on his wheat because he produces more bushels than his neighbor.

In thinking of the size of their farm business most farmers probably have in mind the number of acres they farm. However, a 20-acre truck farm may be larger in many respects than a half-section wheat farm. The cotton farmer thinks of his farm in terms of the number of mules used or the number of families employed. The dairyman thinks of the number of cows he milks. In the grazing areas of the West the number of cattle or sheep grazed is usually more important than the acres of pasture.

The most important reason for the wide difference in land area used by farmers is in the variations in the types of farming followed in different parts of the country. In Table 6 the farms in the United States in 1920 are classified into 10 size groups according to land area. There is a wide range in the size of farms when classified on this basis. In general, cotton farms have fewer acres than wheat farms, while hay and grain farms or dairy farms have more acres than fruit or truck farms.

TABLE 6.—*Farms in the United States classified by area, 1920*

Area	Number of farms	Percentage
Total all farms	6,448,000	100.0
Under 3 acres	20,000	.3
3 to 9 acres	268,000	4.2
10 to 19 acres	508,000	7.9
20 to 49 acres	1,504,000	23.3
50 to 99 acres	1,475,000	22.9
100 to 174 acres	1,449,000	22.5
175 to 259 acres	531,000	8.2
260 to 499 acres	476,000	7.4
500 to 999 acres	150,000	2.3
1,000 acres and over	67,000	1.0

Climate influences the size of the farm business. The number of days favorable for doing various jobs at different seasons of the year influences the crop acreage that can be handled by a given crew. The number of acres of each crop that one man can handle is influenced by the number of days the land is dry enough to work during the season when the crop is being put in and cared for. A given crew can harvest a larger area of wheat in California where the wheat crop can be left standing for some time after it is ripe than in the more humid regions where the crop must be cared for in a few days.

The family farm is the farm of most common size. This is true partly because the farm home and the farm business are so closely linked together. It increases the work of a farmer's wife to bring a hired man into the home. This may be avoided by hiring a neighbor's son who can live at home or by hiring a married man and providing him with a house. In many sections, however, it is very difficult to hire men on this basis. An efficient married worker soon starts farming on his own account and can not be hired on the wage basis.

To be done right, farm work must usually be done by those who are interested in it or under the direct supervision of the farmer. Many a farmer makes a good hand in the field and has the full cooperation of members of his family, but is unable to get others to give proper care to the work for which they are hired. It takes tact and skill in handling men to get the most out of hired farm laborers. Consequently, only the exceptional farmers can afford to run farms so large that hired men must be kept throughout the year. Thus the working force of the family is an important thing for any farmer to consider in deciding upon the proper size of farm to operate.

The size of the farm often grows with the size of the family. As the farmers' sons grow older and take an interest in the farm work the successful farmer adds to the size of the business with a view to having enough land for his labor force and so as to have a piece of land for each of the boys when they have grown up and want to begin farming for themselves. It often happens then that the farm is split up into a number of smaller farms as the boys start in on their own account.

One important disadvantage of the large farm in general-farming regions is the time used in going to and from work in distant fields. Also, where a number of men are employed it is often hard to find emergency jobs for them in the case of rain, breakdowns in equipment, or other interferences with the regular work at hand. Under such conditions, it is only the exceptional manager who can get full return for the wages paid.

There are many ways by which a farmer may increase the size of his business. More land can be rented or bought. Very little additional capital is needed if the land is rented. On many farms the land area may be increased by clearing, draining, or terracing land already in the farm. One hundred and twenty acres devoted to corn, oats, and hay, which is too much for one man to handle but does not keep two men busy, may perhaps be increased to a full two-man farm by the addition of a few acres of such crops as sugar beets, potatoes or fruit, depending upon the market demand and the location of the farm. Here the farmer has to decide whether he will make the most by renting or buying enough more land to make a two-man farm with corn, oats, and hay or by putting a part of his 120 acres in crops that take more labor.

Adding more livestock, even if some feeds have to be bought, is often a very satisfactory way to enlarge the farm business. Many eastern dairy farmers can grow enough hay and silage and have enough pasture to take care of more cows than the number for which they can produce all the grain required in their ration. Here it is easy to add to the farm business by buying grain or other concentrates and keeping more cows.

Changes in the size of the farm business should be made only after careful consideration of the effect of the change on the profits of the farm as a whole. A profitable change may mean adding to the land in the farm or to the labor and equipment used. Changes, however, usually do not mean adding on a few acres of land or hiring a little additional labor. For example, to increase the size of a well-organized 2-mule cotton farm effectively, another unit must be added to the farm, making a 3-mule farm. This could be done by securing another man, buying another mule and the equipment needed for another 1-mule crop, and renting or buying the land on which to grow the additional cotton and corn or other crops. In this case the one man and mule and the necessary tools to work with may be called the unit of organization, and there should be enough land to make the best use of the time of the additional man and his equipment. (See figs. 9 and 10.)

On the dairy farm one man and the number of cows he can milk and grow hay and silage for is the unit of organization. In this case, however, the unit is not so fixed as on the cotton farm or the corn farm. A few cows can gradually be added to the unit as member of the family are able to give more time to the dairy.

Probably the first thing to be considered in deciding whether to enlarge the farm business is the labor force. If there is enough land and equipment and stock to make good use of the farmer's time, the farm is likely to be an efficient 1-man farm so far as its size is concerned. To make a 2-man farm out of it, another team might be bought, and an additional plow, cultivator, or such other machines as are needed, and more land rented or bought. If the hired man is to live in the home, it must be decided whether the additional profit from the 2-man farm will be enough to offset the disadvantages of keeping the hired man.

There is no best size of business for farmers in general. There is always a best size of farm business for a given farm at a given time. If a man has the ability to manage a large business and is inclined to push things, he will find a large business more profitable one year with another. On the other hand, the less able manager may be better off in the long run to have a business of only moderate size. And there are many who find it more profitable to hire to some one who can direct their efforts satisfactorily.

A good farmer with a large business has a better opportunity to make money than he would have with a small business. A less capable farmer, on the other hand, can lose more money with a large business than he can with a small business. For example, take Farmers A and B, each of whom was operating a

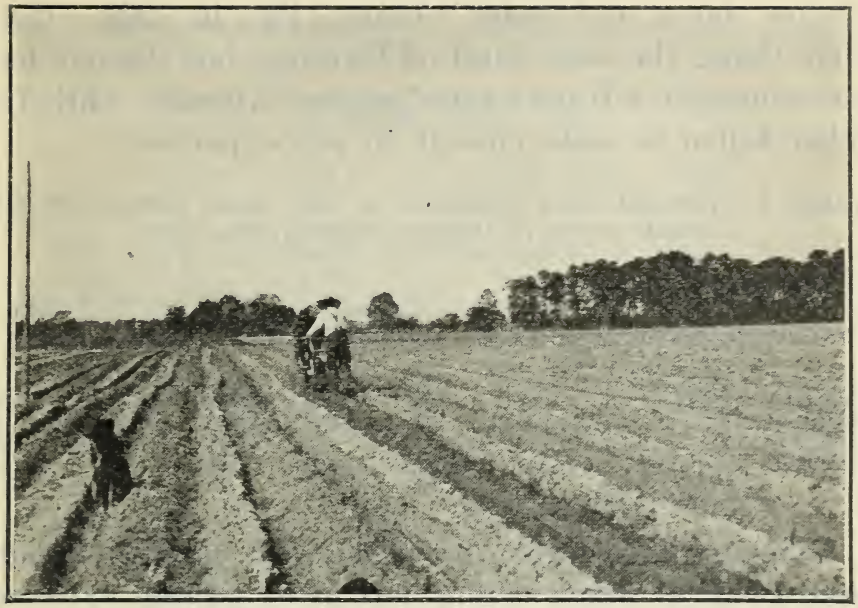

Fig. 9.—One mule, a few simple implements, and 30 to 40 acres of land is a one-man unit in the Cotton Belt

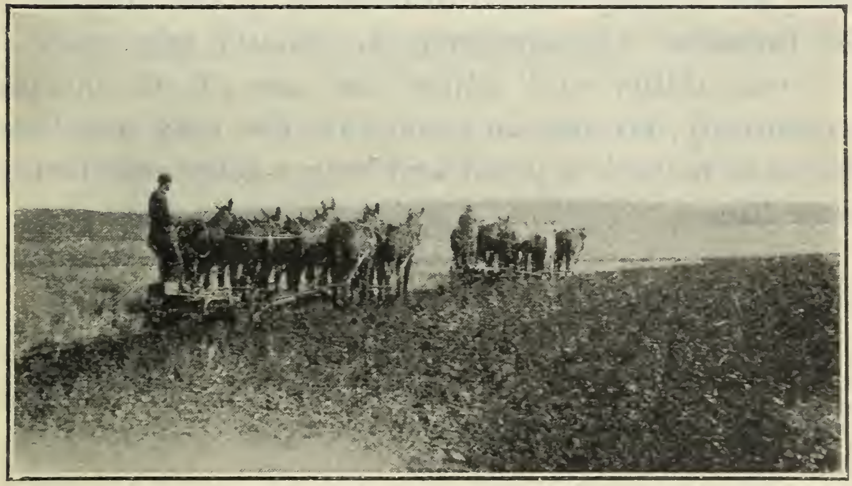

Fig. 10.—It takes 12 to 15 horses, many expensive machines, and two sections of land to make a two-man wheat farm in the Columbia River Basin

17-cow dairy in Chester County, Pa., in 1922. Both were doing the same kind of farming, but the one had a nice margin left over after paying expenses, while the other failed to make enough to pay expenses.

TABLE 7.—*Receipts and expenses on two large farms and two small farms in Chester County, Pa., 1922*

	Number of cows	Receipts	Expenses	Difference
Farmer A	17	$6,127	$2,718	$3,409
Farmer B	17	1,195	2,382	−1,187
Farmer C	6	1,768	858	910
Farmer D	6	994	643	351

Likewise farmer C who milked six cows had more than twice as much money left after paying expenses as did farmer D who milked the same number of cows and grew about the same crops. These differences are largely due to differences in the abilities of the farmers. Consequently one should take stock of his own ability and adjust the size of his business accordingly, keeping in mind that one may sometimes choose to make less profit and have a more satisfactory farm life.

CHAPTER VII

HOW TO GET THE FARM WORK DONE

The work on a farm is made up of a long list of jobs that change from day to day and from season to season. First, there is the work of preparing the land and seeding or planting the crops. This is nearly always a busy time. Then there is the harvest of small grain and hay, the corn husking, cotton picking, tobacco cutting, etc., all of them keeping the farmer in the field for long days of hard work. There is also the work of feeding and caring for the livestock that must be done every day.

Besides this work on the crops and livestock many odd jobs have to be done on every farm. These include building or repairing fences, cutting weeds and brush in the fence rows, repairing buildings or machines, and the like. While such jobs are not directly connected with the growing of crops and keeping livestock, they must nevertheless be done if the farmer is going to stay in the business.

A farmer does most of his work out in the open. This means that he can not always do the things he would like to do on a particular day. When the Corn-Belt farmer plans on Saturday to start cultivating corn on the following Monday he knows that a rain may force him to change his plans. So he must have in mind some other work that can be done in spite of the rain but which is less urgent at the time than the corn cultivation. By doing some odd jobs while it is raining or while the land is too wet to work he may have more of his time free for cultivating corn when it is dry.

Field work comes first. The uncertainty of the weather makes it difficult to plan the work very far ahead. When the weather is good and the soil right for working, nothing should be allowed to interfere with the field work. The best farmer is the one who gets the odd jobs out of the way and keeps the teams moving when the land is in condition for field work.

Much work can be done on rainy days. Many miscellaneous jobs can be done under shelter while it is raining. Cleaning stables, making indoor repairs on buildings, mending harness, and repairing tools, are good examples. If these things are not done in rainy weather, it may be necessary to stop field work and do them just when the time of men and horses is worth the most. Good farmers usually have in mind a number of things that can be done in case their field work is stopped by rain. The job which is most likely to interfere with the field work when the weather is again favorable should be done first. It is a good plan to keep a list of these jobs in a notebook so that they can be looked over when the rain comes, then the farmer can decide quickly which should be done first.

Wet land jobs can be done after it stops raining, but before the soil is dry enough to work. Hauling hay, hauling straw for bedding, cutting weeds or brush, repairing fences, and many other tasks can be done while the soil is too wet to work. If they are done then there will be more time for getting the kind of work done which can be done only after the soil is dry. Farmers have to work with nature and so must keep their plans in line with the changes in the weather if all of the work is to be done at the right time.

Many jobs must be finished before the ground is frozen or covered with snow. Fall plowing and potato digging are examples of work that should be done before the ground is frozen. Every farmer should know about when his ground usually freezes enough to stop such work and should plan to have all his work of this kind done by that time. A Corn Belt farmer can do such jobs as corn husking and cutting

FIG. 11.—Wood cutting can be done at most any time of the year, but the good manager plans to do it when no other work is pressing

brush and the like after the ground is frozen, but not after a heavy snow. Consequently he does the fall plowing first, then husks his corn, but both jobs must be rushed so that the corn husking will be finished before the work is stopped by bad weather.

Rush work calls for long days. Feeding and milking dairy cows, sowing oats, planting and cultivating corn, planting cotton, and setting out tobacco are examples of work which suffers if not done at the right time. If the dairyman neglects his cows there will soon be no milking to do. If the oats are not sown until the warm, dry days of late spring, they may not be worth harvesting, and if the corn cultivating is put off for a week after the crop is large enough to cultivate, the fields will be weedy and the crop poor. This class of work is rush work, because the profits depend upon doing as much of it as possible and doing it well. In rush seasons the farmer must put in long days, expecting to ease up on rainy days or when the rush is over. At such times a good rule to follow is "Do nothing to-day which can as well be put off until tomorrow."

There is a certain amount of "get-out-of-the-way" work. Jobs that do not have to be done at a definite time must be given careful attention, for if they are put off too long, the rush work may be delayed. (Fig. 11.) For example, seed corn may be tested and shelled any time after it is well cured, but if it is neglected until the fields are ready to plant, then that most profitable work in the cornfield may be delayed. Such work may be called "get-out-of-the-way" work. It takes more planning, more thinking, and more will power to do this work in seasons when there is no rush work than it does to do the rush work, for the seasons call the farmers to the rush work, while it is only by using his head that he can get the other sort of work out of the way in advance. The rule to follow when there is no rush work on hand is found in the old phrase, "Put off nothing until to-morrow which can be done to-day."

By following these simple rules and carefully planning the work, a farmer will find it much easier to get everything done at the right time. There will also be more time that can be spent in keeping the farm looking well, the buildings in good repair, the lawn attractive, and at other tasks that add to the satisfaction obtained from life on the farm.

CHAPTER VIII

HOW FARMERS CAN GET THE USE OF LAND

How to get land to use is a question to which present-day farmers must give careful attention. When land could be gotten from the Government for nothing or at a very small price per acre this was not such a problem. Then one could usually find free or cheap land by moving a little farther west. Often there were many hardships to be met and dangers to be faced, but the desire for good free land was so strong that the land was rapidly taken up and made into farms in spite of the hardships and dangers.

It is no longer possible to get good land free of charge. Land must be either bought from others or rented. More than one-third of the farmers in the United States rent all of the land in their farms. Another 10 per cent rent a part of the land they use. Thus, altogether, almost half of the farmers in the country rent all or a part of the land they farm.

Only a few young farmers have enough money or credit to enable them to buy all of the land that they can farm to best advantage. If each farmer used the land he could buy and pay for, many young farmers would be operating farms too small for them and many older farmers would have too much land. The renting of farm land helps to get the land into the hands of those who are in a position to cultivate it, but who can not afford to buy.

After a farmer has decided upon the approximate size of business which he thinks will be most profitable for him to operate he must then decide whether to buy or rent the farm. Many farmers who have only a small amount of money and who are capable of managing large farms find it more profitable to rent fairly large farms and use what money they have in buying teams, equipment, cows, and other stock instead of buying the very small farms that they could buy with only a little money.

Many farmers have been able to accumulate enough money to buy a part of the land they need but still find it desirable to rent some land in addition to what they own. This is often desirable where a farmer needs additional land to use while his sons are helping him with the farm but who will probably not be able to run such a large business after the sons start out on their own account.

Farms and farm land are rented in many ways. Some are rented for a fixed sum of money; others are rented for a fixed amount of some one product, such as bales of cotton or bushels of wheat. A very large portion of the rented farms in this country are rented for a share of the products of the farm or a share of the profits from the year's farming operations. In some regions many farmers pay a share of the products as rent and also pay a small cash rent for the use of a house, a pasture, or for some special privilege.

Share renting is the most common form of renting. The farmer with little capital and but little experience in farming finds share tenancy better than remaining a hired man. Under this system the farm owner usually gives considerable attention to the management of the farm. If he is a good manager and the tenant is anxious to profit by his experience the tenant can learn a great deal while working under the supervision of a good farmer. Many a young farmer learns some of the most important points in successful farm management in this way.

Renting for a share of the product also has the advantage that it spreads out the risk, so that in the bad years when the crops are poor or the prices low, the rent is correspondingly small. The landlord who lives near his farm and can give some time to advising with the tenant will usually get more rent year in and year out by renting for a share of the products rather than for a fixed rent. The share-renting landlord has more risk and gives a part of his time to the supervision of the farm and so must have a higher rent than the landlord who rents for a fixed sum and does not give any time or attention to the way in which the farming is carried on by the tenant.

On share rented farms the landlord often furnishes the tenant with a part of the equipment or livestock needed to stock the farm properly, and in many cases bears a part of the expenses of running the farm. Because of the differences in what landlords and tenants furnish, the portion of the products paid for rent varies widely under different conditions. In the cotton and tobacco growing regions it is common for the landlord to furnish the land, buildings, teams, tools, and other equipment and give the tenant half of the crop for doing the work. Those who work on this basis are generally known as croppers.

The half-share system is the most common form of share renting. But there is a wide difference in what the landlord furnishes in addition to land and buildings. In many grain-growing regions the landlord furnishes only seed grain. In other cases the landlord furnishes the seed and pays for half the twine and threshing. Sometimes the landlord furnishes only the land and buildings and gets half of the grain crops and in addition a cash rent for the land in hay and pasture. The one-third share and the two-fifths share for the use of land and buildings are common methods of renting in many parts of the country. Landlords who get one-third or two-fifths of the products usually do not furnish anything except the land and buildings.

Farms are sometimes rented for cash or for a fixed rent. Not nearly as many farms are rented for cash as are rented on a share basis. In many parts of the Cotton Belt it is customary for the tenant to pay the landlord a fixed amount of cotton for the use of his farm. This is not so big a risk for the tenant as paying a fixed sum of money, and it relieves the landlord of having to supervise the farming carefully to be sure that his share of the rent will be satisfactory. If the tenant knows that he will get all that he makes above a certain amount, he is more likely to take a greater interest in making all that he can than he does where he gets only a share of the products. On the other hand, if the crop is poor and it looks as though there will be only about enough cotton to pay the rent, the landlord is likely to find the crop abandoned and he may have to hire some one to finish the cultivation and harvest the crop in order to get his rent.

Cash renting is also fairly common in the Corn Belt. It becomes less common during periods of low or uncertain prices for farm products. At such times the tenant hesitates to take the risk of a poor crop and a poor price unless the rent is very low, and the landowner must choose between a very low cash rent and the possibility of more rent if let on the share basis.

Owning the farm one operates has many advantages over renting. The farm business and the farm home are closely linked together, and where one owns his own farm he has a fairly permanent home. A great deal of the satisfaction in farming comes from having a good farm as a home and as a business. Most good farmers take pleasure in building up their farms to make them more productive. The tenant on the other hand can not be expected to be so interested in improving the farm he rents.

A great deal of care should be given to choosing the farm to be bought or rented. The productivity of the soil, the condition of the buildings and fences and how satisfactory they are for the kind of farming one expects to do, are important things to consider. And a farmer should remember that he is buying a home as well as a place to work. His life and that of his family may be influenced more by the character of the farm and the community as a place to live than by the farm as a place to make money.. The richness of farm life consists largely of things which money can not buy.

In buying a farm one should be careful to make a good bargain. The selling prices of farm lands are subject to wide changes from time to time. This may make it desirable to rent land at certain times until the land can be bought for more nearly what it is worth for use in farming. For example, many farmers who bought land at a very high price in 1919 or 1920 and went heavily into debt for it, would, no doubt, have been very much better off if they had rented and waited until later to buy. There is always a tendency for the price of land to go too high during periods of prosperity and too low during periods of depression. If one has the money to pay cash he may suffer no hardship if prices fall soon after he has bought his farm, but if he goes in debt for it, he is likely to find it very difficult to meet his payments. The young farmer or tenant farmer who is buying for the first time usually can not pay the full price of the farm and must be careful to buy it on terms that he can meet.

CHAPTER IX

THE USE OF CREDIT IN FARMING [1]

Many farmers do not have enough money to buy a farm and the equipment and stock with which to operate it. Others are able to own their farms but find it necessary to borrow money from time to time in order to pay the hired man, the implement dealer, the fertilizer dealer, or to meet some other expense of running the farm. Buying on credit or going into debt is a common experience at one time or another in the life of most farmers.

A farmer should not borrow unless it will make his business more profitable. A farmer can often make more money if he can borrow money with which to buy fertilizer or better cows or to hire some help. But unless he can actually make more profit from the borrowed money than it costs, the use of credit may do one more harm than good. Borrowed money must be repaid, usually with interest, and the farmer should borrow only in case the money will make the farm more profitable. When times are good and credit is easy to get, there is often a temptation to borrow too freely and to go so far into debt that it will be difficult to get out if one or two bad years come along. When prices are low it is often necessary and desirable to use credit more freely so as to tide over financial difficulty until conditions are better.

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[1] N. A. Olsen, in charge of the Division of Agricultural Finance, Bureau of Agricultural Economics, assisted in the preparation of this chapter.

On account of the high cost of land, equipment, and labor, the farmer should have some capital of his own before he tries to buy and run a farm. Farm earnings are very different from one year to the next, and in many years the net return on capital invested in farming is lower than the interest rate that must be paid for borrowed money. It is usually unwise, therefore, to try to run a farm entirely on borrowed money.

Because of the nature of the farming business, farmers need several kinds of credit which are not used so much in other businesses. Long-term credit is needed by farmers in much larger amounts than any other form of credit. Loans made for the purchase of land and for making permanent improvements are usually large and a farmer needs several years in which to repay them. Loans of this kind are secured by mortgages on land. Over one-third of the farms operated by their owners in this country in 1920 were mortgaged.

The leading sources of long-term or farm-mortgage loans are local banks, life-insurance companies, farm-mortgage companies, private individuals, State funds, or special credit agencies, and the land banks operating under the Federal farm loan act.

Local banks, life-insurance companies, and farm-mortgage companies have been especially active in providing farm-mortgage credit. Private individuals, both farmers and others, also loan a lot of money on farms. The well-to-do and retired farmers of a prosperous neighborhood often invest their savings in loans on farm lands. Many retired farmers hold mortgages on the farms they operated before selling out. These men know land values and know the borrowers, so they can make their loans with very little risk. Many of these country money lenders are fine citizens and leaders for a better country life who take pleasure in seeing young farmers get ahead.

Various States have set up special credit agencies for loaning money to farmers, and in 1916 the Government established the Federal farm loan system. Under the Federal farm loan system loans are made by both Federal land banks and joint-stock land banks. The Federal land banks may make loans of $25,000 or less to actual farmers.

Federal land-bank loans are usually obtained through local farm-loan associations. These associations are chartered by the Federal Farm Loan Board and may be organized by 10 or more farmers who want total loans of not less than $20,000. The funds used in making farm loans are obtained chiefly from the sale of bonds which are secured by the mortgages taken for the loans.

Location and districts of Federal land banks and Federal intermediate credit banks

Location	States in each district
1. Springfield, Mass	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey.
2. Baltimore, Md	Pennsylvania, Virginia, West Virginia, Maryland, Delaware, District of Columbia.
3. Columbia, S. C	North Carolina, South Carolina, Georgia, Florida.
4. Louisville, Ky	Tennessee, Kentucky, Indiana, Ohio.
5. New Orleans, La	Alabama, Louisiana, Mississippi.
6. St. Louis, Mo	Illinois, Missouri, Arkansas.
7. St. Paul, Minn	North Dakota, Minnesota, Wisconsin, Michigan.
8. Omaha, Nebr	Iowa, Nebraska, South Dakota, Wyoming.
9. Wichita, Kans	Kansas, Oklahoma, Colorado, New Mexico.
10. Houston, Tex	Texas.
11. Berkeley, Calif	California, Utah, Nevada, Arizona.
12. Spokane, Wash	Idaho, Montana, Oregon, Washington.

The system under which the joint-stock land banks operate is very similar to that of Federal land banks. The joint-stock land banks may make loans in amounts up to $50,000 to both actual farmers and other owners of farm land. Loans may be obtained direct from the bank or through its local agent. No investment in the stock of the bank is required, nor does special liability attach to the borrower for losses incurred on other loans. The interest rate can not be higher than 6 per cent, and this is the rate charged by most of the joint-stock land banks.

A good system of loaning money on farms helps farmers to become owners, and it was for this reason that the Government system was established. It is not likely, nor is it desirable, that all farm mortgage loans be made by the banks that operate under the Federal farm loan act. The long-term loans made by these banks are needed for the purchase of farms. On the other hand, farmers obtain a large volume of mortgage loans for development and equipment purposes, and such loans, which usually run from one to five years, are usually made by other credit agencies.

The turnover in the farm business is relatively slow. The farmer who raises beef cattle may keep them two or three years before selling. Most crops are not sold for six months or a year after they are planted. Farmers, therefore, need credit for production and marketing purposes for longer periods than commercial banks that make a business of short-term loans can conveniently and safely advance. To describe such loans the term "intermediate credit" has been adopted. Intermediate credit is advanced on personal and collateral security for periods ranging from six months to three years.

Special provision for intermediate credit was made by the agricultural credits act of 1923, which established 12 intermediate credit banks. These banks are located in the same cities as the Federal land banks, serve the same districts, and have the same officers and directors. They operate under the supervision of the Federal Farm Loan Board. Funds for lending purposes are obtained from the capital subscribed by the United States Treasury and by the sale of short-term debentures running from six months to three years.

The intermediate credit banks provide farm credit in two ways—first, by discounting farm paper for local banks, livestock-loan companies, and other institutions which supply farm credit; and, secondly, by direct advances to cooperative marketing associations. They do not lend direct to farmers.

Individual farmers may obtain the discount benefits of the system through their local banks or by the organization of local agricultural-credit corporations.

Cooperative marketing associations may obtain direct advances secured by warehouse receipts on staple agricultural products such as grain, cotton, wool, tobacco, hay, dried prunes, raisins, and canned fruits and vegetables. This money is usually paid to the farmers by the cooperative association as an advance payment on their products.

It is not intended that the Federal intermediate credit system should replace the present banking system in extending credit to farmers. Its purpose is to supplement and assist existing credit institutions loaning money to farmers on terms that meet their needs.

Short-term loans for six months or less are obtained by farmers largely from local banks, neighbors, or merchants. The cost of such loans from banks is usually somewhat higher than that of long-term or mortgage loans. Farmers get a great deal of short-term credit from merchants of various kinds. This is particularly true of cotton and tobacco growers in the South. Merchant credit has often been more expensive than bank credit. Stores, dealers, or factories which advance goods or funds to farmers on credit must add to their prices enough to cover the cost and risk of selling on credit. At times merchant credit is advanced under contracts which bind farmers to market their products to the lender. Such arrangements may deprive a farmer of his freedom in marketing and may cause him to take a lower price.

The amount of short-term credit needed by farmers depends somewhat upon the type of farming followed. The farmer who grows a variety of crops as well as livestock, and derives his farm income from several sources throughout the year, does not usually need as much short-term credit as the farmer who depends largely upon one crop. From a credit viewpoint, therefore, there is much to commend diversification of farming in regions where conditions are suitable.

A farmer's ability to get credit depends in a large measure upon his standing in the community and with his banker. Often the confidence which the lender has in the character of the borrower and his ability to repay the loan is just as important as the amount of property he can put up as security. One should be careful therefore, to develop and keep a good credit standing with those from whom he borrows. Prompt payment of loans and accounts when due, good farm management, and the ability to make up a good financial statement of his farming business will do a great deal toward making it easy to get satisfactory loans from banks or individuals.

Many a farmer does not have the credit standing which he should have, not because he is dishonest, but merely because he is careless in his dealings. Farmers who are not able to repay their loans at the exact time they are due, or who are busy with other matters, are often inclined to let their loans run on until they are ready to pay, without even taking the trouble to explain the situation to their creditors. Often a banker may hesitate to make a loan to a farmer or to extend a loan because the farmer refuses or neglects to give the banker a full and frank statement of his financial condition. A farmer can also improve his credit standing by the use of life and property insurance.

CHAPTER X

MARKETING FARM PRODUCTS

The farmer's economic problems do not end with deciding what to produce and how to produce it. He must also consider the question of marketing the farm products. When farmers produced primarily for their own needs there were no marketing problems. But now farmers produce chiefly for sale, and farmers in different parts of the country specialize in different products. Dakota farmers sell wheat; Iowa farmers sell hogs and cattle; Oregon farmers sell fruit and wheat; Texas farmers sell cattle and cotton; and other States likewise have their special products. The farmers of each region produce a surplus of things they can grow best and then buy other things from other regions.

The term "marketing" as it is now used means more than selling. A farmer who hauls his wheat to the local elevator and sells it may be said to have marketed his wheat, and so far as that farmer is concerned it may be true. But in the broader sense of the term marketing is used to include everything that happens to the wheat from the time it leaves the farm until it reaches the consumer as flour or bread. It also covers the question of "who gets the money," which the consumer pays for the final product—that is, how much of it reaches the farmer and how the balance is divided among the middlemen who handle the product. Also the question naturally comes up as to whether the farmer gets a square deal in the division between the farmer and the middlemen of the money the consumer pays.

Many products are sold directly by the farmer to the consumer. The dairyman who delivers his milk to regular customers in a small city is a good example. Here there is no middleman problem, for the farmer bargains directly with his customers. Garden truck, fruit, potatoes, eggs, and poultry are other examples of products that are often sold directly by the farmer to his city customers.

The public markets in many towns and cities provide a meeting place for near-by farmers and consumers, and by carrying his produce there the farmer may "cut out the middleman" entirely. (Fig. 12.) It must be remembered, however, that to do this a farmer usually has to spend considerable time just waiting for customers, and if there is rush work to do on the farm he might be better off to sell to the grocer or wholesale dealer and return to help with the farm work. Some products go direct from the farmer to the consumer by parcel post or express. Butter, eggs, poultry, fruit, and vegetables are sometimes so shipped to special customers. A farmer can sometimes get a premium for fresh, high-quality products by selling them in this way to people who are willing to pay a premium for quality. But this method of selling is often expensive because of the small shipments and the expense of the containers.

Selling direct to the consumer has its advantages. Where products are carried directly to consumers the farmer and the consumer must in some way find each other and agree as to terms of sale. Often the time a farmer must spend in finding customers and agreeing upon the selling price would return the farmer more if it were spent on the farm and some one else allowed to do this work. True, the farmer may not get quite as much for his products, but he may be able to grow enough additional produce to more than pay for the difference in price. This happens because the farmer is usually more expert at producing than he is at selling.

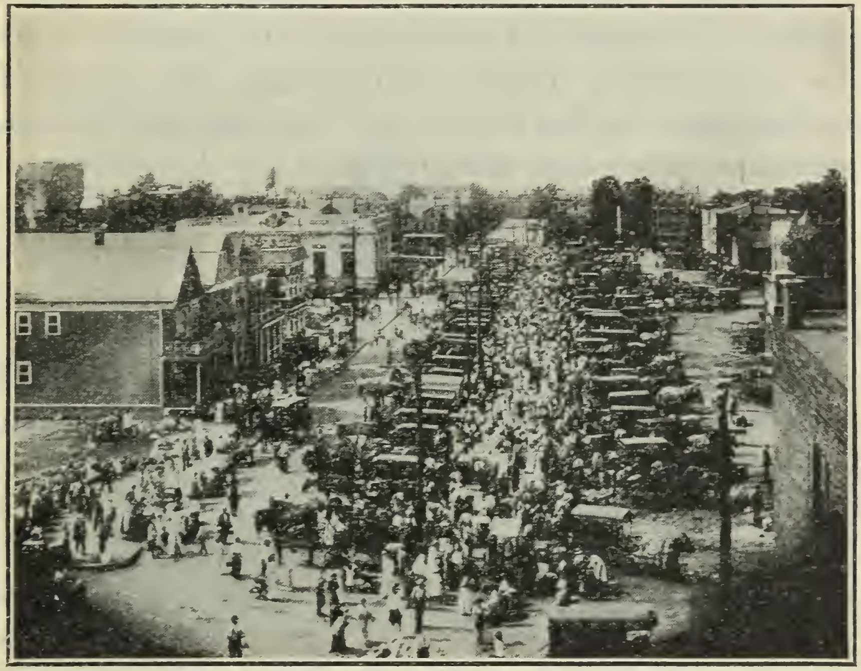

FIG. 12.—The public market provides a meeting place for near-by farmers and consumers

The milk business can be handled fairly easily on the direct-sale basis, because the farmer has a regular list of customers who take about the same quantity of milk from day to day. The main difficulty in delivering milk from the farm is the problem of having an even supply for the customers. Some months too much is produced, other months not enough, and this is difficult to regulate. Getting rid of the surplus in one case and finding means of increasing the supply at another time worries the farmer milkman and in many instances makes him glad to leave the distribution of milk to the milk dealer, who makes that his business. The larger the city and the farther a farmer has to drive in order to get to his customers, the more desirable it is to sell to the milk dealer.

Most farm products are not sold directly from the farm to the consumer. Such products as wheat, cotton, potatoes, apples, pork, beef, and a long list of others are ordinarily handled by a large number of middlemen before they reach the consumer. Take wheat, for example. A North Dakota farmer may sell his wheat to the local grain dealer, who also buys from other farmers until he has a carload. The local dealer then ships it to Minneapolis and instructs his commission man at that point to sell it for him. At this point the wheat may be milled into flour or it may be cleaned, graded, and reshipped to Chicago or to an eastern point for milling or export. In either case, owing to the great distance, the wheat or flour may be sold and resold many times before it finally reaches the consumer as flour or bread. (See Fig. 13.)

The question then comes up as to the necessity of having so many men handle the wheat between the farmers and the consumer. Do these men, each in turn, render some service? They do. Are these services rendered in the most efficient manner and for a just charge? This question is not so easily answered, and here is the real middleman problem. No progress can be made in settling the middleman argument unless this question is kept in mind.

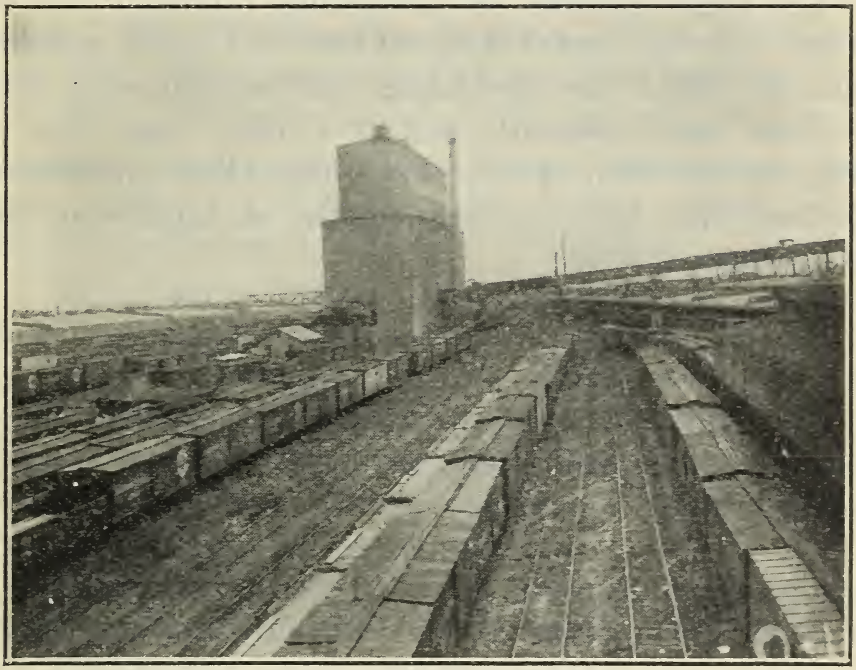

FIG. 13.—Grain usually travels long distances and passes through many hands before it reaches the consumer

When prices are good and he is making money a farmer thinks very little about what the consumer pays for his products and what the middleman gets out of the deal. But when the farmer's prices are low he is inclined to look at the prices which consumers are paying and ask why there is so much difference between what he gets and what the consumer pays. This may account for the increased interest which farmers took in marketing problems following the decline in prices in 1920.

The right solution of marketing problems can be found only by careful study of the work which middlemen do with a view to finding out how this work may be done more efficiently and at a lower cost. Let us first consider step by step the things which middlemen do and then take up the question of improving the middleman system.

CHAPTER XI

WHAT HAPPENS TO FARM PRODUCTS AFTER THEY LEAVE THE FARM?

Most of the things that farmers produce can not be handled directly from the farmer to those who consume them. This is true for at least three reasons:

1. Many products are ordinarily consumed at a considerable distance from the farms where they are grown, and it is not easy for the farmer and the consumer to get in touch with each other.

2. Most farm products are produced in greater quantities during certain seasons of the year than during others. Consumers, on the other hand, buy in rather regular amounts throughout the year. This makes it necessary for some one to keep a part of the produce over from the harvest season to the times when it is wanted by consumers.

3. Most farm products do not leave the farm in the form in which consumers want them. The farmer sells cotton and wheat and consumers want clothing and flour or bread. Other products are sold in bulk and ungraded, while consumers want them in small quantities and of a certain kind and quality. Many people make a business of taking the products as they come from the farm and sorting or modifying them so that they will suit consumers.

Because of these facts it is usually necessary for a number of services to be rendered as farm products move from the farm to the consumer. Some of these could be done on the farm and at one time or another most of them have been done on the farm. But as farming has grown into a specialized business, where most farmers grow only a few things for sale, they have allowed others to make a business of performing some of these services for them. In this way they are able to provide consumers with products when they are wanted, where they are wanted, and in the form in which they are wanted.

All of the steps discussed in the following pages are not taken in the marketing of every product, but for most farm products some or all of these services must be rendered before they reach the consumer.

GRADING AND STANDARDIZATION

The work of sorting or classifying a product into groups in which the product is about the same in kind, size, quality, and appearance is known as grading. Potatoes, for example, are graded by sorting them into groups on the basis of size, freedom from soft rot, scab, or other diseases, and so on. Standardization fixes the grades so that they will be the same from year to year. In this way buyers and sellers can deal with each other on the basis of a graded product and not be in doubt as to its quality.

Buying by grade is much easier than going to the trouble of examining or inspecting every purchase, and since it saves time it is also cheaper. Selling by sample or type is much more satisfactory where there are well-established grades. Standard grades are also used in auction sales of farm products in large cities. The lending of money on warehouse receipts representing stored products is based upon the use of generally recognized grades.

The use of grades and standards helps those who use them to get a better price for their products. However, a farmer can not often get the full benefit of grading unless his neighbors grade also, for the local dealer may have to mix one farmer's graded product with his neighbor's ungraded product and consequently he may pay both farmers the same price. For this reason one important marketing problem in which the farmer is interested is, "Is Farmer A getting a fair price for his products in comparison with his fellow farmers, B, C, and D?" The use of grades and standards does much toward solving this problem.

Standardized grading of farm products must take into account the wishes of consumers. The consumer wants a nice-looking apple with a pleasing flavor. The miller wants wheat that will give a large percentage of high-quality flour, because the consumer wants high-quality flour with which to make the best light white bread. Grading may be done voluntarily by the farmer, dealer, or shipper. Cooperative associations may require their members to grade their products before turning them over to the association for sale. Grading may also be required by State or National laws.

PACKING

Practically all farm products are packed or packaged in some form before the consumer buys them. The main reason for packing is to make the products easier to handle. Cotton or hay in bales, apples in barrels or boxes, eggs in crates, and wool in bags are fairly easy to handle, whereas it would be very awkward to try to handle any of these products very many times without the use of containers. Packing also reduces freight, storage, and other marketing costs, prevents shrinkage and loss of quality, and makes products more attractive.

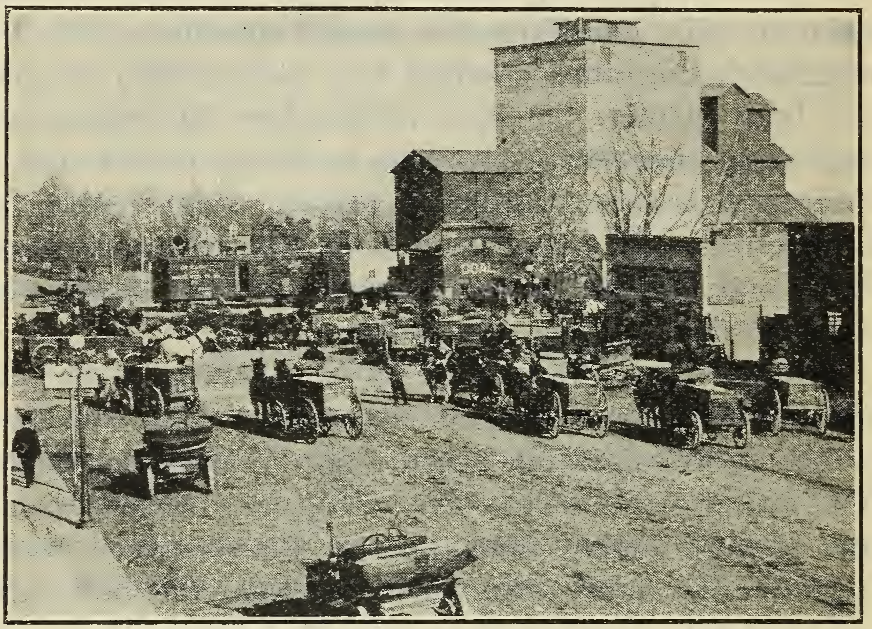
Fig. 14.—Grain from many farms is brought together at the local elevator for shipment to the central market

ASSEMBLING OR BRINGING TOGETHER LARGE QUANTITIES OF PRODUCTS

The cost of shipping farm products is usually less when they are shipped in carload lots. A farmer usually does not have a full carload for sale at one time. The local buyer or local shipping association can assemble products from a number of farms and in that way keep down the cost of subsequent handling. (Fig. 14.) The creamery must assemble cream from a number of farms to keep the plant going at full capacity, and a large packing house must have many carloads of cattle and hogs for each day's operation. (Fig. 15.)

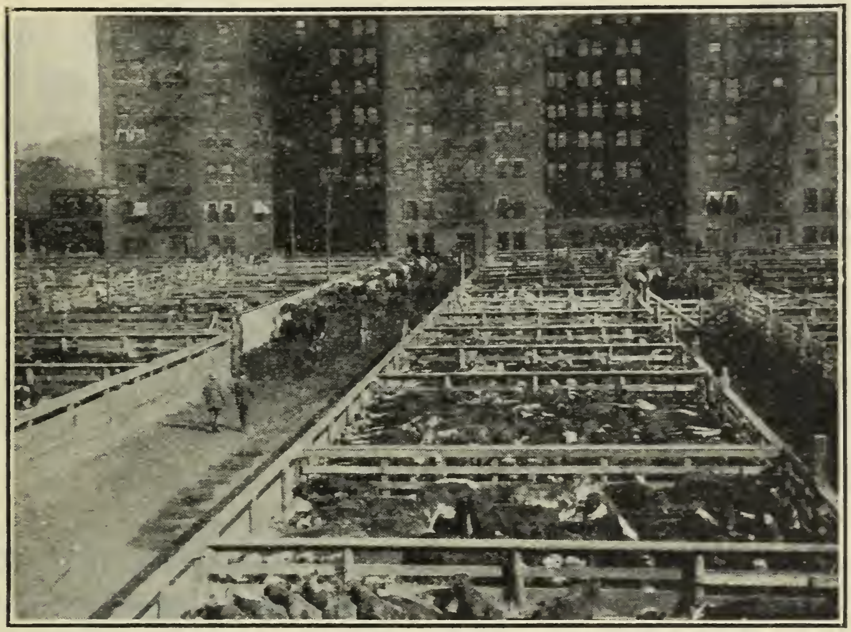

Fig. 15.—Every day many loads of cattle and hogs are assembled in the stockyards near the large meat-packing plants

PROCESSING OR CHANGING PRODUCTS INTO THE FORM DESIRED BY CONSUMERS

Many products do not go to the consumer in the form they leave the farm. The farmer sells cattle, grain, hides, and cotton; the consumer buys meat, bread, shoes, and clothing. Between the time the products leave the farm and the time they reach the consumer steers must be made into steaks, wheat must be made into flour or bread, hides must be made into leather and then into shoes, and cotton must be changed into cloth and then into garments. At one time most of these things were done on the farm, and some processing is still done on farms. Canning fruits and vegetables is a form of processing commonly done on farms, but usually only to meet the needs of the farm family.

Processing is now done largely away from the farm, either by private concerns or cooperative organizations. Cooperative creameries are engaged in processing, and, together with creameries privately owned, have served to move the butter-making business away from the farm in many regions. Processing not only changes raw materials into finished products but it helps to preserve the heavy production of one season to be used later when needed. The canning of fruits and vegetables and the manufacture of butter and cheese are examples.

TRANSPORTING

The distance between farmers and those who consume their products makes transportation an important part of marketing. If he sells to near-by customers a farmer must usually haul the produce to them by truck or by wagon. Most products are sold at some distance from the place where they are consumed and must be shipped by rail or water. This accounts for a part of the difference in the prices which farmers get and those which consumers pay.

A part of the cost of transporting perishable products is due to the necessity of using refrigerator cars and ice to keep them in good condition. Other products must be protected from the cold while being shipped. The farmer can often get more out of his products by giving more care to avoiding waste from breakage and spoiling in transit.

STORING AND WAREHOUSING

Farm products are harvested at rather definite seasons, whereas consumption is fairly uniform during the different periods of the year. This makes it necessary to store some products during seasons of heavy production for use during seasons of light production. Wheat may be stored on the farm or in elevators. Butter, eggs, meats, and some fruits are kept in cold storage from one season of the year to another.

When a farmer stores his crop instead of selling it at harvest time it is usually with the hope of securing enough more for it to pay the cost of storage, interest on the money he might have otherwise received at once, and an additional profit. Sometimes, however, products are stored until a more convenient time for hauling them to market.

If it were not possible to store products, many of them would be very cheap at certain seasons of the year and very high or not obtainable during other seasons. Storing helps to keep supplies and prices steady, and so works to the advantage of both producer and consumer.

FINANCING AND RISK TAKING

A problem of financing is involved in marketing because most products must go through a number of hands, be moved some distance, and be held for some time before the consumer finally pays for them. A wheat farmer may borrow money from his local bank to pay the expense of harvesting and threshing his crop, so that when he sells he needs the money to pay the local banker. The local grain dealer may borrow from the elevator company located in the central market to which he later ships the grain. The terminal elevator companies in turn borrow, using warehouse receipts as collateral. And so each middleman along the line from the local buyer to the retailer may handle the product on borrowed money on which interest must be paid.

These interest charges are a part of the cost of getting the products from the farm to the consumer. They are particularly high on products which must be held over from one season to another. In this case one must also run the risk of a drop in price before the product is sold. Other risks are the danger of loss by fire, waste in storage or transportation, and other damage. Whether these risks are carried by farmers, insurance companies, or by middlemen, they must in the long run be paid for in the price which the consumer pays.

SELLING AND DISTRIBUTING

The act of selling may occur but once or it may occur many times. The farmer may sell direct to the consumer at the farm, on a public market, or from his wagon at the consumer's door. He may sell to the country buyer or carlot assembler, to the grain elevator or creamery, or he may ship by consignment or on sale to a commission firm in a large market.

The country buyer or carlot assembler may sell to a commission man, a packing house, or a centralized creamery. The commission man or packing house may sell the same material, perhaps in another form, through jobbers or direct to retailers. The retailers sell to the family buyers—the final consumers. There are other methods of sale to fit other conditions, jobbers, brokers, traveling salesmen, agents, auctioneers. advertisers, all contribute services in various methods of sale.

As farm products move from the farm toward the consumer they are assembled into larger and larger quantities for the purpose of storing, transporting, or processing. But once they begin to make their way to those who hand directly over to the consumer they are then handled in smaller and smaller quantities. The warehouseman may have several carloads of apples in storage, but the wholesalers who buy them from him may want only 25 or 50 boxes at a time. The wholesaler then turns them over to the retailer in even smaller quantities and they are finally sold to the consumer by the pound, half dozen or half peck.

Distributing, and particularly retailing, farm products is expensive, and the cost of this service often represents a large part of the cost of getting the product from the farm to the consumer. Many consumers demand credit, delivery, and other expensive services from retailers, all of which serve to widen the margin between what the farmer gets and what the consumer pays. The growth of the cash-and-carry stores has served to reduce this tendency, but there still are many who are willing to pay for the extra services rendered by the other stores.

These steps in marketing must be taken. Farmers, consumers, and others sometimes have a great deal to say about "cutting out the middleman." But there are very few who would agree that we should cut out the services that middlemen render. Whether they are done by a farmer himself, by cooperating groups of farmers, by middlemen, by consumers, or by some governmental agency, the fact remains that in every case some or all of these services must be rendered.

Are these middleman services performed efficiently and for a fair charge? This is the real issue between the farmer and the middleman, and the question applies, whether the work be done by farmers, middlemen, cooperative organizations, or by Government agencies. It is not an easy question to answer, but it is usually considered that where free competition exists prices tend to become fair. There are, no doubt, many cases where it may be desirable for farmers acting cooperatively to give private agencies the competition necessary if the middleman charges are to be as low as possible.

There are two important questions in connection with what happens to farm products after they leave the farm that farmers and others are interested in: (1) Is Farmer A getting a fair price for his products in comparison with Farmers B, C, and D, and (2) are middlemen services and processes costing too much?

The first is a problem of standardization. The second question is one of efficiency and a fair charge for service.

CHAPTER XII

IMPROVING THE MARKETING SYSTEM

Farmers, consumers, and middlemen are all interested in improving the marketing system. Farmers are often anxious to get a larger portion of the dollar that the consumer pays for his products. Consumers want improvement so they will be able to get more for their money. Middlemen are interested in improving the marketing system because their costs of operation may be reduced and they may receive some of the benefit as well as farmers and consumers. The only question then is, Where and how can the improvement be made?

Three lines of action are open to those who wish to improve the marketing system:

(1) The farmer, as an individual, can do much to remedy the situation.

(2) Cooperating groups of farmers can do some things which the individual can not do.

(3) Some improvement can be made by Government agencies.

Each of these ways to improve marketing is worthy of special consideration.

Often enough attention is not given to the things which a farmer can do single-handed toward solving his marketing problems. Frequently a better price can be obtained from the local dealer by taking care to have products of such quality that they meet the needs of those to whom the local dealer sells. Again, he may get a premium by putting his product in proper form for handling or shipment as, for example, by putting his apples or peaches in boxes or small baskets. Wool that is carefully packed and graded may bring a premium over wool that has been carelessly prepared for sale.

Often better prices can be secured by studying the market and giving some thought to the best time of selling. Also, if a grower knows market conditions and the quality of his product, he is in a good position to dicker with the local buyer and get the most out of his products. Wherever standardized grades are used, a grower should be fully informed about them. When he is fully informed he will usually decide that it will be more profitable to use the grades.

Another place where individual action is necessary is in choosing the things to produce which will sell to good advantage. Farmers sometimes blame the marketing system for low prices when there may be only a very slight chance of helping farmers by modifying the marketing machinery. By carefully studying the prices of farm products and by giving attention to the selection of the lines of production it is often possible to make savings here that are many times as great as any that can be made through improvement in marketing. This point is discussed in more detail in Chapters III, IV, and V.

Groups of farmers acting together can often do many things for the good of the group that one farmer act-

ing alone could not do. Take, for example, the problem of selling graded products. A farmer may decide to grade his wheat or potatoes before selling them to the local buyer. But if he sells less than a carload and the local buyer has to mix what he sells with what his neighbors sell without grading, the farmer who grades his product may get the same price per bushel as his neighbor. Under such conditions it might be possible for several farmers to grade their product and then combine their shipments into carlots of standard products before sending them to market, and in this way get a better price.

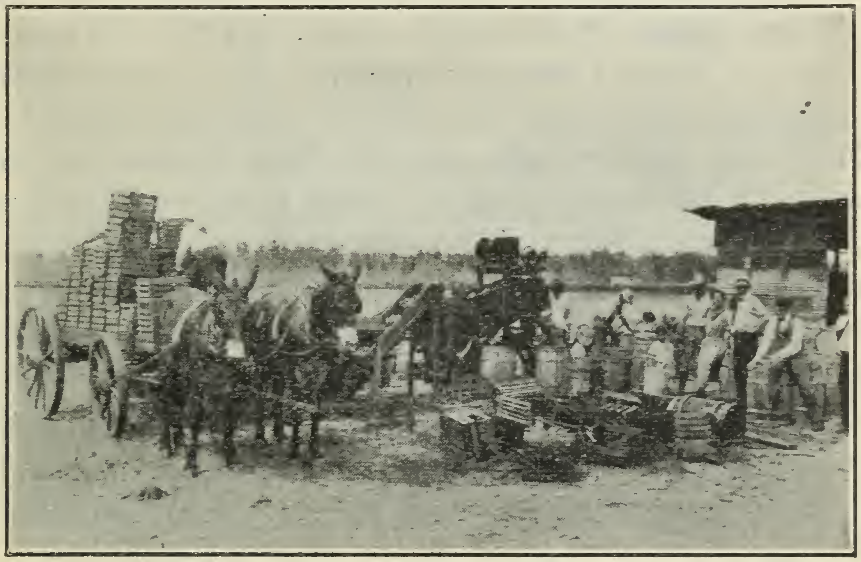

FIG. 16.—Sorting potatoes into recognized standard grades

Many farmers' cooperative associations have done a great deal toward encouraging their members to sell a graded product that comes up to definite standards of quality. In this way an organization may build up a reputation for its products, and by advertising may encourage people to buy them. Grading the products of the farm by use of recognized standards is one of the important results that may come from joint action on the part of farmers (Fig. 16).

The cost of marketing can often be reduced by joint action on the part of farmers. Farmers often find it necessary to go into the marketing business so as to reduce the cost of handling their products and get a better price. Such action usually starts with taking over the work of the local dealer. The local livestock shipping association is a good example (Fig. 17). Here the farmer representative has taken over the work of the local livestock buyer and the farmer receives the central market price, less the cost of shipping and handling, including a fee paid to the farmer representative as commission or salary. This is often more satisfactory than the method where each farmer dickers with the local buyer, who may do so little business that he must have high pay from each farmer, or who may do all the business of the locality and practically set his own price on the farmer's products.

In the local market the farmer comes in contact with his cooperative organization from time to time. Every member can know what the manager of a local cooperative marketing association is doing and can advise with him and understand what progress is being made. It is much easier for cooperation to succeed under these conditions than it is where the farmer hardly ever sees those who are working for him.

Many of the things that middlemen do are done at some distance from the farm. The terminal elevator business and the packing business are examples of important lines of work with which farmers are seldom in touch. Here it is naturally more difficult for organized groups of farmers to take over the work that middlemen do than it is in the case of the local market.

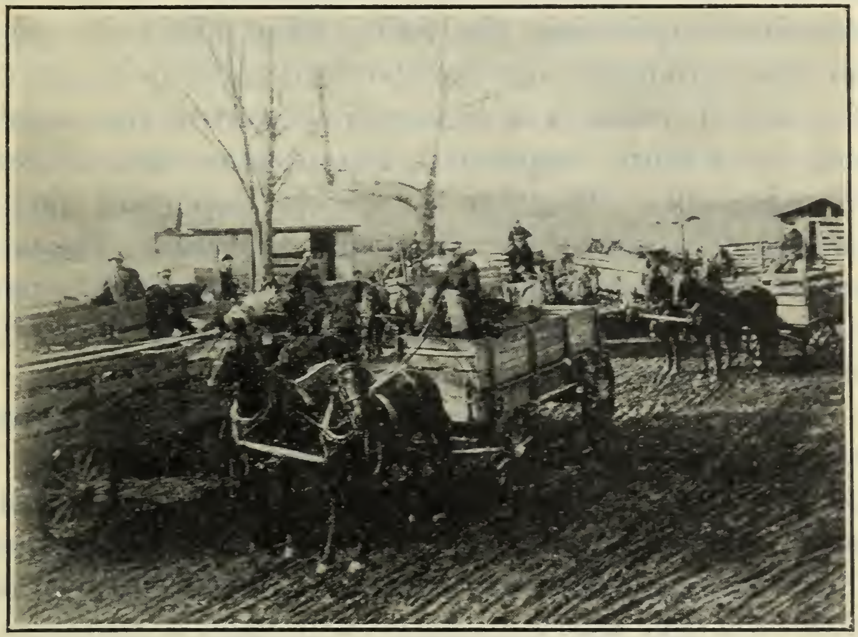

FIG. 17.—Members of a cooperative shipping association bringing together a shipment of hogs

Many cooperative organizations, however, have carried their work into the central market successfully. A number of local organizations can combine to form a central organization for the purpose of selling their products. Where farmers thoroughly understand the problems involved and are able to secure good men to manage the organization this has some advantages. By having a central organization it is possible to have the products of about the same kind and quality coming from the different local organizations. This makes it easier to establish a reputation for the products by advertising, and by having one sales agency it is often possible to cut down the expense of selling.

While selling products at a fair price is one of the things that farmers may successfully strive for through cooperation, the fixing of a monopoly price for their products is an end they can not hope to attain. To control prices it is necessary to control the supply and for a truly cooperative organization this is next to impossible. Weather is a most important factor affecting the size of a crop in any one year. Farmers might be persuaded to reduce their acreage of a particular crop and yet a good season could make the harvest larger than ever.

Monopolistic price fixing is contrary to the broad spirit of cooperation and is prohibited by law. It is true, however, that a cooperative organization may help farmers to produce more regularly by keeping them informed as to the probable need for their products. In this way consumers will have a more even supply of products from year to year and at a price which does not change so much from season to season. This makes marketing easier and helps both consumers and farmers.

Government agencies can do certain things to improve marketing. After all has been done through education and individual effort on the one hand, and cooperation by farmers themselves on the other, there is still much to be done toward improving our marketing system. Some of this can be done by the Federal Government working in harmony and in close cooperation with the State governments.

For example, take the question of fair charges for the service of livestock commission men, grain commission men, or commission men dealing with fruits and vegetables. Cooperating groups of farmers are undertaking to perform their own commission services through hired agents. At the same time the United States Department of Agriculture, acting through the Packers and Stockyards Administration, is gathering information which will give basis for passing judgment upon the fairness of commission charges. The department also has the authority to adjust these rates to a fair basis. Some believe that work of this character by Government agencies will do a great deal toward solving the problem of fair charge for middlemen services in the central market.

Another example of the way in which the Government can aid in securing a square deal for the farmer when his goods reach the central market is through the introduction of standardized grades and the use of these grades in buying and selling farm products. A striking example of this is in the fruit and vegetable inspection service. A carload of spinach is shipped from Austin, Tex., and upon arrival in New York City there may be more spinach on the market than is needed. The dealer who had contracted for the spinach might report that the car arrived in bad condition and for that reason he will not take the spinach, or if he does take it, the farmer will have to take a very low price. What is the farmer at Austin to do? He can not afford to go to New York to look into the matter and without some system of Government inspection he is at the mercy of the New York dealer. But under the present system of inspection he can call for Government inspection of the car and if the spinach is in good condition he can force the dealer to carry out his contract. If the spinach is in bad condition he has the basis of a claim upon the railway company in case the spinach was in good condition when received by the railway.

This inspection service is provided in all the large cities at the present time and has practically done away with the possibility of the dealer in the central market robbing the farmer on the basis of a false report on the condition of his product when it reaches the market. The development of an efficient system of Government inspection has done much to help establish justice in settlements between shippers and dealers at the central market (fig. 18).

Another thing which the Government can do to improve marketing is in the matter of collecting and giving out reliable information which can be used by farmers, farmers' cooperative organizations, dealers in farm products, and consumers. The United States Department of Agriculture, through its Market News Service, is already doing much in this direction. The news service on livestock at Chicago may be used to illustrate what can be done.

Beginning every day at 4.30 a. m., a representative of the Bureau of Agricultural Economics telephones the office of every railroad entering Chicago and gets a statement of the number of cars of each kind of livestock that arrived during the night and also the number of cars expected to reach the market for sale

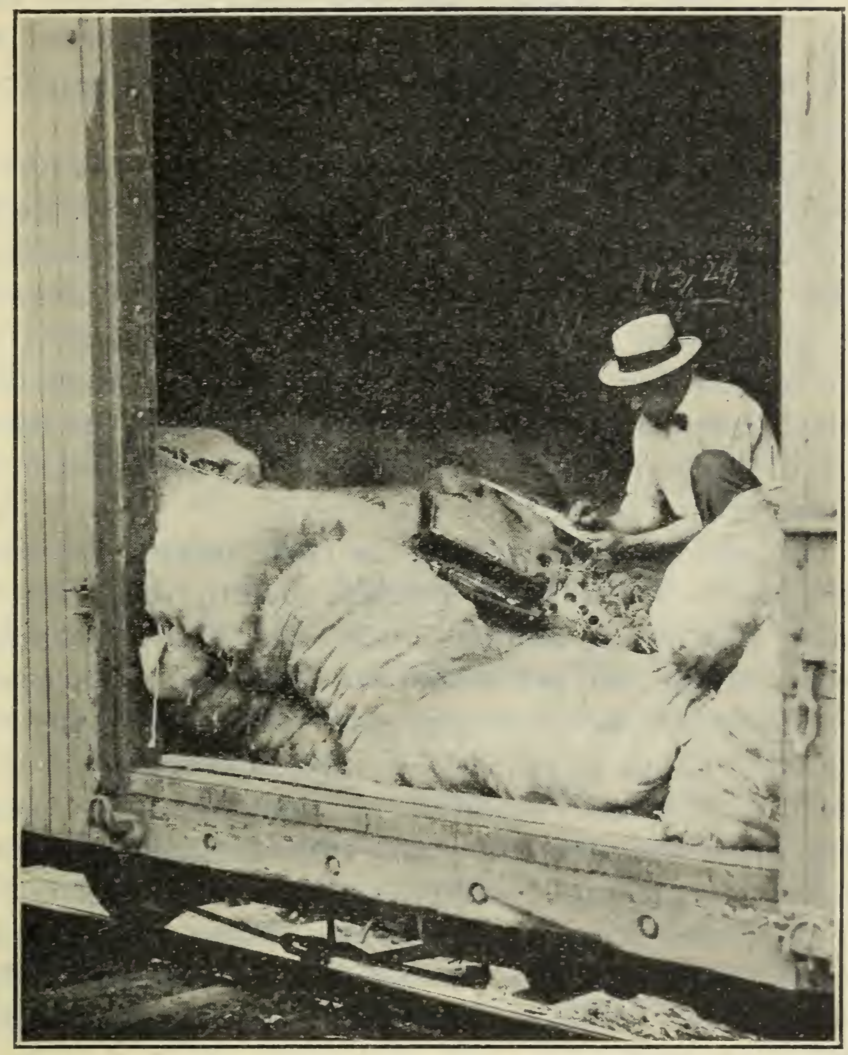

FIG. 18.—A Government inspector inspecting a car of potatoes at the terminal market

during the day. Knowing the kinds of livestock shipped from different sections of the country and the number of animals usually loaded in the car the bureau representative can make a close estimate of the number of each class of animals that will reach the market for that day's trading. This information is released at 6 a. m. and has an important influence upon the prices which are paid for livestock on that day.

About 11 a. m. an estimate is issued giving the number of head of each kind of livestock expected to reach the market in time for the following day's trading. This estimate is broadcasted by radio and can be used by shippers in deciding whether to send their stock to the market for sale on the following day. More detailed statements covering conditions in different markets are prepared daily and sent to those who need such information.

Through its news service the Government can help farmers to know their markets before they ship—know what these markets want, who else is sending produce there, and prices that are being paid. Through its inspection service it can give farmers at many of the large shipping points a disinterested report on the exact quality and condition of their products when they leave the shipping point and can give a similar report showing the quality and condition when the products reach the large markets. These two services are an important part of what farmers can expect the Government to do toward improving the marketing system.

CHAPTER XIII

HOW TO SUCCEED IN COOPERATIVE MARKETING

Cooperative marketing is one of the most important means used by farmers in trying to solve marketing problems. A great many cooperative undertakings have been successful, some have failed completely, and others have been a partial success. There are several things that farmers must keep in mind if they want to succeed in cooperative marketing.

Cooperation must meet a real need. Unless it is possible to do something by cooperation that is not already being done or do something better than is already being done, farmers are likely to lose interest in cooperation. Farmers are usually most willing to cooperate when they are rather hard pressed and there seems to be a need for a cooperative organization that will help them to get a larger share of what the consumer pays for their products. This sometimes leads farmers to try cooperative marketing when there may be only a slight chance of improving the system. Thus a need for cooperation means that it must be possible for cooperation to return the farmer more money for his products than he is already getting.

It is usually better for the cooperative association to handle only one product. It is sometimes possible for a cooperative marketing organization to handle several products successfully if the products are marketed in about the same manner, but cooperation is usually most successful where the association specializes in the marketing of some one product, such as cotton, tobacco, grain, wool, or livestock. The cooperative livestock-shipping association may handle cattle, sheep, and hogs successfully, or the cooperative elevator may handle corn, wheat, and oats. But a cooperative organization that attempts to handle all of the products which come from a general farm is likely to fail.

A cooperative marketing organization should handle a large amount of produce. If a manager is hired, there should be enough produce to keep him busy, and it seldom pays to organize for cooperative marketing unless there is enough business to make it worth while to hire a manager. The overhead expense of running a small business is likely to be almost as large as for a large business and where the business is small the overhead expense may more than counterbalance any savings made by cooperation.

Standard grades can be used more satisfactorily by a cooperative association if a large amount of produce is handled. The selling can be done to better advantage where large quantities are handled, and especially if a reputation for a good product is established. It is hard to build up a reputation with only a small amount of produce. If an organization has products for sale from year to year, the cost of selling may be reduced by selling to the same buyers each year.

There are, however, some successful organizations that handle only a small amount of produce and do not hire managers. In most cases their success is due largely to some one man in the community who has a broad vision and a well-trained trading instinct. He may be a farmer or a successful business man who wants to help the farmers in their sales work.

The membership contract should be used to make sure that there will be enough produce for the cooperative organization to handle. Many attempts at cooperative marketing have failed because farmers promised to sell their products through the association and then did not keep their promises. A membership contract is a cooperative agreement among all the members for their own protection. The contract is not needed if all the members are loyal, but in starting a new organization a contract is necessary to success. Contracts should have a liquidated damage clause, so that if a man does not live up to his contract he will repay the association for any expense incurred in getting ready to handle his business that year.

Success in cooperative marketing depends upon the management. No business can succeed without good management; least of all, can a farmers' cooperative marketing organization. The manager must look after the business of the association and at the same time keep the members satisfied. The members of a cooperative association usually take a great deal of interest in the business and the manager must see that they understand everything properly. The manager is usually employed by the board of directors who are responsible to the members for the management of the association. The board of directors should be made up of capable business men who have the confidence of the members.

In starting a new association a great deal is often done by committees and public meetings. Ordinarily the first board of directors is selected in this way. The organization should be so formed that the men who are the clearest thinkers and have the best business judgment will do the things for which they are best suited. The men who are best able to handle the affairs of the association should be placed in the most responsible positions. Once the association has been formed there should be such an organization that it will not again be necessary to call in a public committee or have a public meeting to reestablish the policies of the association or to provide a board of directors to manage the affairs of the association.

Members of a cooperative association should be fully informed about their organization and what it is doing. No cooperative organization can succeed without the continued interest and support of its members. Every member must get back of the organization morally and financially. They will be more willing to do this if they know just what their organization is doing for them and understand what they must do to help the manager and the board of directors make a success of cooperation. Farmers should remember that the association can not do things for them without their support.

One way to keep farmers accurately informed as to what their association is doing is by keeping a full account of the business it transacts. A cooperative marketing association acts as an agent of the farmers, and it should give them a full account of the work it has done for them and a statement of what this work has cost. At least once each year the accounts should be audited by disinterested experts, and all the facts regarding sales, overhead expense, and costs of operation should be given to the members.

A cooperative marketing association should be controlled by its members. The principle of one man one vote gives every member equal power in controlling the organization and encourages mutual trust and confidence among the members of an association. The next best thing is to allow each man to vote according to the use he makes of the organization.

The risks of marketing should be carried by all of the members of a cooperative association. The capital necessary to start a cooperative association and furnish equipment for handling the business should be contributed by the members in proportion to the use each member makes of the organization. The association should set aside a part of its earnings or savings as a reserve so that it will be able to stand the strain of the hard times that are likely to come during some years.

The cooperative movement presents a human as well as an economic problem. Neighbors who know each other and have confidence in each other usually find it easy to cooperate. In any cooperative marketing association the organization should emphasize the importance of having local organizations made up of farmers who live in the same community, belong to the same churches, and have the same schools. The farmer must keep in close touch with his organization or he will soon lose interest in it. The local organization should have a part in the work of the large organization, as this will help to keep up the farmers' interest and the members will know more about what is being done. Unless a farmer has a part in the work he is likely to feel that the organization was formed for him and not by him.

A good cooperative marketing association can do much to make a community a better place in which to live. The members of an association can gain a great deal by getting together and talking over their common problems. This helps to develop a community spirit among the members, and with good leadership may mean a great deal toward improving community life as well as marketing.

CHAPTER XIV

BETTER LIVING ON THE FARM

There is more to farming than making money by running a farm. A man may be expert at growing crops, at feeding livestock, and at marketing his products and still his life be a failure. The primary object of "better farming" and "better business" on the farm should be to make it possible for the farmer and his family to live better. Better living means having more attractive farm homes, more conveniences in these homes, better schools, better churches, better roads, and many other things that help to make life in the open country more enjoyable.

A farmer can do a great many things to make farm life attractive. One of the easiest of these is to give some time to improving the appearance of the farmhouse or the lawn, fences, and buildings near the house. A neat-looking farm home and farmstead is something to be proud of, and things can usually be kept looking well by putting in a few hours of work around the house at times when there is little field work to do. The farmstead may be improved by having grass in the yard, and flowers, shrubbery, and trees properly arranged. This can generally be done without a great deal of expense.

Another thing most farmers can do to help make farm life more desirable is to give more attention to raising things that can be enjoyed by the family and that may be too expensive if they are bought. A little time spent on the garden or in taking care of a few fruit trees may make it possible for the farmer and his family to enjoy a great variety of cheap and healthful foods that they could not afford to buy.

Many conveniences are much less common in farm homes than in city homes. Running water, sinks, bathtubs, heating plants, and electric or gas lights are still not very common in most farming regions. A farmer can have some of these conveniences at a relatively small cost, and they help to make farm life more enjoyable.

There are many things about country life which can be improved if the farmers of a community work together for improvement. The improvement of the country school is a good example. One farmer working alone may be able to do very little toward getting a better school, but if all the farmers who send their children to school work together and try to make the school a better place for their children a great deal may be done. Likewise, a single neighborhood may not be able to afford a high school, but by going in with a number of other surrounding neighbors they may be able together to maintain a very good high school to which all farmers can send their children. Farm children should be able to attend good schools with well-trained teachers, and this will usually come about only where farmers themselves take an interest in the education of their children and see that these things are provided.

A great many other community organizations and activities add to the richness of farm life. Many farm communities have a community building or "community center" that is used as a meeting place, where various kinds of amusement and entertainment may be held. (Fig. 19.) This makes it very easy for farmers and farmers' wives to meet together and discuss their common problems and decide upon ways for improving their community.

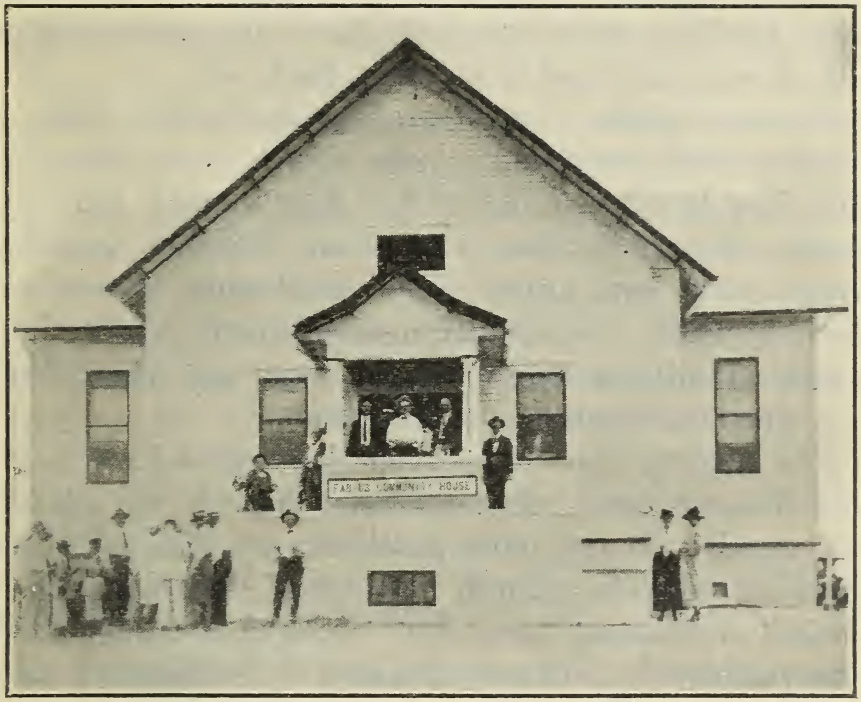

FIG. 19.—A "community center" such as this is worth much to the farmers of a neighborhood

The extension agencies of the State colleges of agriculture and of the United States Department of Agriculture are helping to make farm life more pleasur-

able. These agencies are paid by the State and Federal Governments to help farmers make use of the knowledge gained through experimental and research work at the State colleges and experiment stations and in the Department of Agriculture. All of these agencies appreciate fully that the principal object in "better farming" is to make the lives of farmers and their families more enjoyable, and they are ready to help toward this end in any way they can.

Farmers' clubs, and farm boys and girls' clubs of various kinds are doing a great deal to make farm life more nearly what it should be. Community fairs and picnics bring farmers and their families together where they can enjoy some wholesome recreation. Such occasions are usually more common where there is a community or neighborhood house and where there is a good community organization.

The country church plays an important part in the life of most farm communities. The country church can usually do the most good in communities where there is only one church and every one supports it. Such a community can afford to have a capable full-time pastor who will take the lead in building up community life. Too many country churches are supported by only a few members, who can not afford to employ a regular pastor. It is very difficult for such churches to get a very strong hold on the life of the community. Good roads and automobiles are making it possible for one church to serve more people than it could in the days of the horse and buggy.

All of these things—better homes, schools, and churches—for the country require time for develop-

ment. Much improvement is being made from year to year. Good roads, daily mail delivery, automobiles, telephones, newspapers, farm papers, and the radio are bringing farmers into closer touch with others, and they are learning more about the way other people live. Farmers are learning to want more of the better things of life, and a great deal of thought must be given to the ways in which these things can be gotten.

Many of the things that are less common in the country than in the city are more expensive for farmers to have. A water system or light plant in town may serve several hundred or several thousand homes at a very low cost to each. Farmers, on the other hand, live at a distance from neighbors and each one must ordinarily put in his own light plant or system for furnishing running water. Only a few farmers can afford this expense. Thus many of the things that make for a better farm life can not be had unless farmers are prosperous. Better farming, better business, and better living should go hand in hand.

On the other hand, better farming does not always result in better living. Many a farmer and his family toil early and late in order to be able to burn the mortgage as quickly as possible. Often so much attention is given to getting out of debt in a hurry that many of the finer things of life are lost sight of. The use of the long-time mortgage, which can be paid off gradually, should do much to help the farmer to live better while he is paying for his farm. If all of the good things of farm life are put off until the family gets out of debt and has money in the bank besides, they may never be enjoyed.

Probably the thing which will do most to bring about better living on the farm is the education of the farm boys and girls who will be the future farmers. Country people should learn more about the opportunities in other lines of work and the advantages and disadvantages of the conditions under which others work and live. Farm families are larger than city families, and it is to be expected that many who are reared on the farm will find better opportunities for work at some occupation other than farming. Those who choose farming should know how to succeed as farmers and should understand how to make their community a better place in which to live. Farming will be just profitable enough in the long run to keep plenty of farmers in the business of supplying the rest of the people with food. When farmers as a class learn to feel that they must have better farm homes, better schools, better churches, better roads, and more recreation, if farming is to be more attractive to them than other work, they will gradually acquire these things. It is therefore through the improvement of the general standard of living that the farmers may hope to secure the basis of a satisfactory life.

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